

The Sino-Russian Gas Agreement of May 2014

Hedging Against Risk or Just Risky Business?

Kirsti Svinø

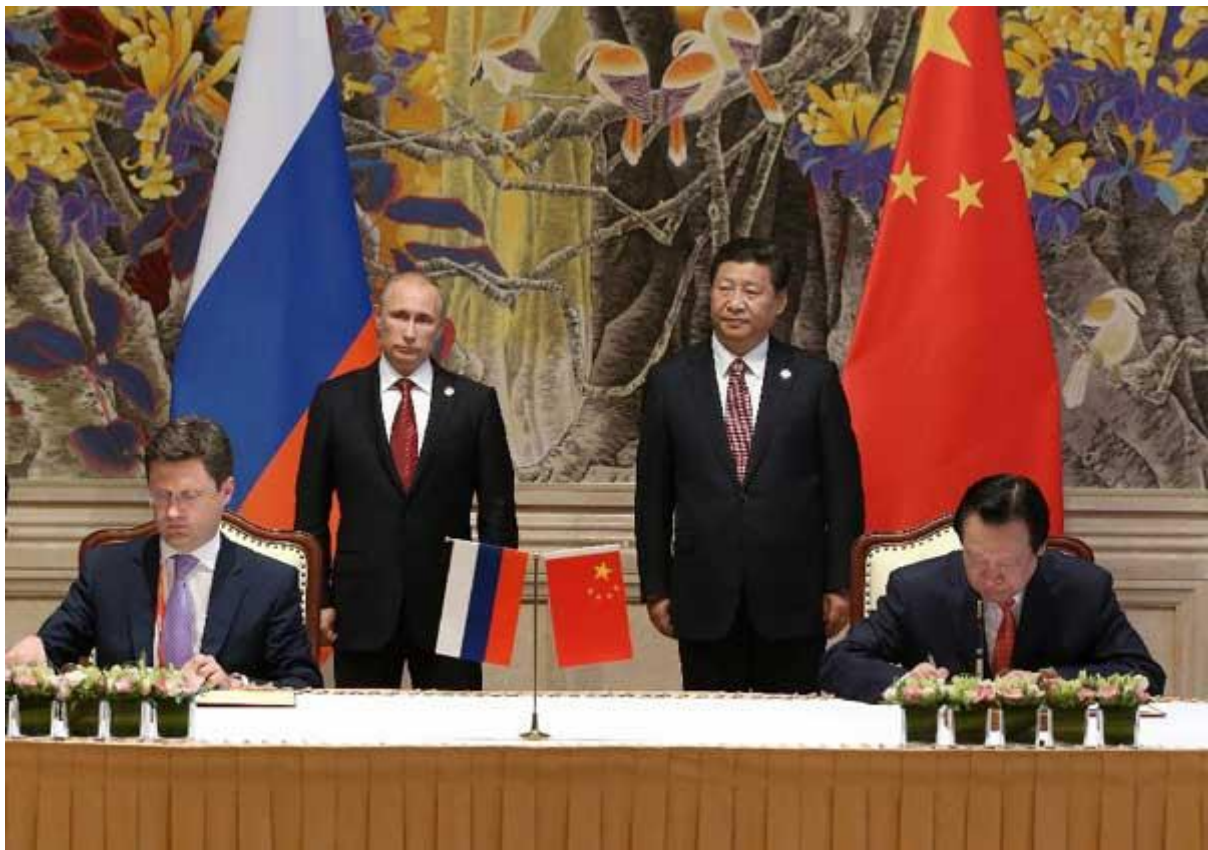
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The Sino-Russian Gas Agreement of May 2014: Hedging Against Risk or just Risky Business



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Abstract

On May 21th 2014 Chinese President Xi Jinping and his Russian counterpart President Vladimir Putin oversaw the signing of a \$400 billion gas deal between the national energy companies China National Petroleum Corporation and Gazprom. After over a decade's worth of negotiations, why did the two parties finally come to an agreement? The following analysis seeks to explain China's motivations behind signing the agreement of May 2014 using the congruence method and three different theoretical perspectives. The main theoretical focus will rest on the relatively novel theory of hedging in order to find out whether this is a better theoretical tool for explaining China's decision to sign the deal than the more established theories of geopolitics and liberalism respectively. By matching theoretically deduced explanations to the empirical evidence found throughout the analysis the intention of the thesis is to both find the decisive factors behind China's decision to sign the Sino-Russian gas agreement, and to make a contribution to the theoretical debate on the hedging term's applicability and usability in international relations.

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Any faults or errors in this thesis are, of course, my own.

List of Abbreviations/Acronyms

Billion Cubic Metres	bcm
Chinese Communist Party	CCP
Chinese Communist Party Central Committee	CCPCC
China Development Bank	CDB
China Energy Fund Committee	CEFC
China National Petroleum Corporation	CNPC
Carbon Dioxide	CO₂
Carbon Dioxide Equivalent	CO₂e
China's Five Year Plans	FYP
Gross Domestic Product	GDP
Greenhouse Gas	GHG
International Energy Agency	IEA
International Oil Company	IOC
International Relations	IR
Liquefied Natural Gas	LNG
Million British Thermal Units	mmBtu
Memorandum of Understanding	MOU
National Development and Reform Commission	NDRC
National Energy Administration	NEA
National Oil Company	NOC
Shanghai Cooperation Organization	SCO
Synthetic Natural Gas	SNG
Sulphur Dioxide	SO₂
Trillion cubic feet	Tcf
United Nations Economic and Social Council	UN ECOSOC
Union of Soviet Socialist Republics	USSR
World Trade Organization	WTO

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1. Introduction

China's fast-growing economy has gone hand in hand with an equally fast-growing need for energy. The rise of China as a major player on the global energy scene has significant geo-political and geo-economic consequences. Even though China is the largest energy consumer in the world (U.S. Energy Information Administration, 2014), its per capita consumption is still lower than that of the United States or Europe (Bahgat 2010: 137-138), indicating significant room for growth. The past few years China has seen a slower economic growth, and reports from the Third Plenum of the 18th Central Committee in November 2013 demonstrates that China's new administration is adamant to meet the populations demand for sustainable economic growth and further development (U.S. Energy Information Administration, 2014), which in turn requires an expansion of its energy imports and diversification of its energy mix.

China's population is about 20 per cent of the world's population, but the country only holds a fraction of the world's proven oil and natural gas reserves and even though China has significant domestic coal reserves, the goal of energy self-sufficiency is long gone (Bahgat 2010: 139). In the early 1990s China was a net oil exporter, however, their economic growth and energy demand have surpassed their domestic supply and in 2010 China imported as much as 4.7 mb/d of crude oil, accounting for around 53.8 per cent of total demand (International Energy Agency 2012: 5-6). The use of natural gas has also grown rapidly in recent years; a demand China largely covers by means of cross-border gas pipelines and LNG ("Liquefied natural gas") imports. Although China has accelerated the domestic production of natural gas, its import dependence is reportedly expected to further increase due to rising gas demand, and according to The International Energy Agency, China could account for 30 per cent of the global increase in natural gas in the following years, which could in turn create ripples across the global energy market (Lelyveld 2014).

The inadequacy of domestic resources to meet a large and growing demand has heightened the government's sense of energy vulnerability and made securing sufficient energy supply at a reasonable price a matter of national security (Bahgat 2010: 139). Reducing its exposure to potential supply disruptions and sudden price rises has

become paramount for regime stability (Tunsjø 2013: 2). An important part of this has been securing energy deals and bilateral agreements with neighbouring states, and in recent years China has been active in trying to establish international oil and gas pipeline connections with its neighbours. One of the largest agreements, and certainly one of the most important construction project related to natural gas was signed in the spring of 2014 between the great power states China and Russia. The following analysis aims to investigate which factors that made the signing of this agreement possible after over ten years of negotiations focusing on China's incentives and concerns as a rising power in the international energy market.

1.1. Research Question

May 21th 2014, Chinese President Xi Jinping and his Russian counterpart President Vladimir Putin oversaw the signing of a \$400 billion gas deal between the national energy companies China National Petroleum Corporation (CNPC) and Gazprom. The agreement was signed after more than a decade of negotiations and obligates Russia to ship natural gas from Eastern Siberia to China via gas pipelines over a period of 30 years (Perlez 2014). This is the largest gas deal Russia has signed since the dissolution of the Soviet Union, and is likely to have great implications both for the two countries involved, but also for greater parts of the rest of the world (Martin 2014).

This thesis provides a case study based on this agreement with the intention to say something broader about China's gas policy and the way the Chinese government conduct energy deals and sign energy contracts with other states. Many factors may have contributed to China's decision to finally sign the agreement and there are several theories and opinions concerning possible drivers of China's energy policies. The thesis will attempt to address this both by explaining the main factors behind China's decision to sign the Sino-Russian gas agreement – a large and important agreement for the Chinese government, but also by contributing to the wider theoretical debate on the theoretical tools applied when attempting to convene these factors into more comprehensive frameworks. I address this topic with the following research question:

What were the decisive factors behind China's decision to sign the Sino-Russian gas agreement from May 2014?

Previous research has tended to focus on China's search for oil and China's energy "rise"; often setting a strategic perspective with close links to the realist international relations tradition up against what is seen as more of a market approach highlighting the importance of non-state actors and international politics as a positive-sum game as opposed to a zero-sum game (Tunsjø 2013: 21). This thesis, on the other hand, focusing on natural gas as a growing part of China's energy mix, will use Øystein Tunsjø's hedging theory, which combines strategic and market elements, and test whether this is a more useful theoretical tool than the more established grand theories of geopolitics/realism and liberalism.

It is important to keep in mind that the market and security considerations related to natural gas are different than those related to oil. Most oil is traded in a global commercial market, with common price setting and exchanges in various regions. The international oil market today also contains a number of instruments for hedging against price movements both for producers and consumers. The international gas market is somewhat different. Because natural gas is more difficult to transport than oil, facilities such as pipelines or LNG terminals will necessarily tie the countries involved together. This prohibits an easy switch to other suppliers and customers, and raises a different set of challenges when it comes to energy security (Harsem and Claes 2013: 785). The countries involved will be more vulnerable to conflicts involving the other state, and will be more dependent on maintaining an amicable and cooperative relationship between each other. This is an especially interesting topic to analyse with regards to China and Russia, both because of their size and role as great powers, but also because of the special relationship between the two, which has alternated between declarations of goodwill and bilateral cooperation and mutual suspicions and contention.

1.2. Theory

In order to structure the analysis and place it in a wider theoretical debate, I have decided to apply three distinctive perspectives in international relations (IR) to the debate: Hedging theory, Geopolitics/realism and Liberalism/Pluralism. Still, the main

emphasis will be on hedging and relevance of the hedging framework to explain China's decision to sign the Sino-Russian gas agreement.

Tunsjø's hedging theory shows how concerns regarding security and profit interact and how China has developed hedging-strategies in order to ensure itself against a growing net gas import gap as well as gas supply disruptions (Tunsjø 2013: 1-3). From a hedging point of view the gas agreement of May 2014 would be viewed as an effort where the Chinese government has tried to minimise the risk that their increasing dependence on energy import has exposed them to.

Tunsjø defines hedging as a "strategy aiming to reconcile conciliation and confrontation in order to remain reasonably well positioned regardless of future development" (Tunsjø 2013: 2), and it is the alleged ability of the theory to capture elements of both market and security consideration, both confrontational and compromising behaviour, that renders it particularly applicable to the research question of this thesis.

To provide a more fruitful and nuanced discussion the analysis will, as mentioned, start out from two more well-established theories, namely the geopolitical theory that assumes states to be both unitary, rational and the most important actors in international relations, and the liberalist theory that expects foreign policy to be an outcome of a domestic process involving several different actors. These various theories direct attention to different aspects of what might have constituted the decisive factor in the signing of the Sino-Russian gas agreement, and to best evaluate these I have separated them into four different explanations: one related to hedging, one geopolitical explanation and two derived from the liberalist perspective.

The hedging explanation views China's decision to sign the gas agreement from May 2014 as a measure where the Chinese government, as part of a hedging strategy, were trying to diversify their energy mix in an effort to secure available and sufficient energy supplies at affordable prices. The geopolitical explanation, on the other hand, emphasizes issues related to balance of power and military-economic competition. A Sino-Russian rapprochement and empirical evidence pointing to priorities towards changing the global system of unipolarity are factors that would correspond with how

the geopolitical argument foresee China's priorities as an emerging power in the international world system. The liberalist theory, emphasizing the importance of non-military issues and non-state actors such as international organizations, civil society and marked actors are divided into two different explanations. One is named the environmental explanation, and is related to environmental factors, which have been of growing concern both internationally and domestically in China. This argument explains China's decision to sign the Sino-Russian gas agreement with environmental concerns where the Chinese government were trying to reduce its dependence on coal due to international climate obligations and social stability caused by protests against health problems and air pollution. The other explanation is called the market explanation. This explanation see the increasing independence of China's NOCs and the importance of the market and economic growth to the stability of the Chinese Communist Party (CCP) as important contributing factors, and propose that the Sino-Russian gas agreement was less of a political case and more a market case where the Chinese oil company CNPC took advantage of a lucrative business opportunity.

In order to make these explanations distinguishable in terms of empirical observations it is also necessary to outline a set of criteria, indicators and expected empirical patterns to be applied in the analysis to aid the discussion in discriminating among the various theoretical perspectives. These will be further elaborated upon in chapter 2 on theory.

1.3. Methodology

Data

The scope of the research question suggests mainly using qualitative data and hence a qualitative method. The thesis will as mentioned above be a case study, and the data sources utilised will include media news, research reports, academic articles and book publications from various think tanks, academic institutions and governmental agencies. Due to moderate language skills in Chinese I have also been able to use some governmental reports not translated to English. All inferences drawn from these sources have, however, been double checked with fluent speakers of Chinese.

Interviews with Chinese political actors or business actors could also be seen as useful for my research question, but after talking to and reading publications from political scientists in the field of Chinese studies I have concluded that this would not be a

fruitful method for this thesis. Chinese leaders both within politics and in business are known to hold their cards close to their chest (if I were so lucky to get an interview at all), and my limited knowledge of the Chinese language might also be a hindrance.

An in-depth analysis of the agreement itself would clearly also be of great help to the discussion, however, it seems clear that neither China nor Russia are willing to publish this agreement in the nearby future. Nevertheless, large parts of the main content have been disclosed and will be accounted for in chapter 3. Still, the lack of comprehensive information constitutes a so-called “black box” that the discussion necessarily will have to work around. Both China and Russia wishes to present themselves as winners of the agreement both to their own population and to the rest of the world and will therefore have strong incentives to keep the details of the gas deal hidden. The NOCs CNPC and Gazprom does not have any desire to publish the agreement either, as this may expose business strategies that they do not want a third party to be acquainted with.

Method

General objections to case study research tend to focus on representativeness and generalisation. Regardless of how much information we have regarding a single case there is no defined foundation for generalisation. However, the thesis does not seek to generalise the results in a broader sense, and could at best expect to generalize in a limited way to possible future agreements that fit the same type (George and Bennett 2004: 236). The size of the states involved in this particular agreement, as well as the size of the agreement itself mean that there are few if any similar agreements in place that the findings in the case study could be generalized to. However, it is for these same reasons that I find the agreement an interesting research object. The attribute as a most likely case for the hedging theory also has the potential to lead to interesting findings with regards to the present debate on the hedging terms usability for explaining China’s priorities on energy.

The obstacles related to fieldwork, as well as an intention to contribute to the on-going theoretical reflection on the hedging-term makes the pattern-matching or congruence method especially suitable for answering this thesis’ research question. The congruence method, which is a theory-centred approach, is also less interested in making

generalizations towards a wider population of similar cases, and more interested in obtaining empirical evidence for a broader theoretical discourse (Blatter and Blume 2008: 315).

The congruence method focuses on drawing inferences from the (non-) congruence of concrete observations with specified predictions from abstract theories to the relevance or relative strength of these theories for understanding or explaining the case under study (Blatter and Blume 2008: 325). In the following analysis this will be done both deductively; by generating ex-ante predictions about what observations of the world will appear according to the hedging-, geopolitical, and liberalist/pluralist theory respectively, and inductively; by reflecting which theory makes more sense for a specific observation (Blatter and Blume 2008: 325).

Blatter and Blume write that: “predictions can and should include assumptions about the most important actors, their perceptions and their motivations, the corresponding structural factors or other fundamental elements of the theory” (2008: 326). These predictions are provided both through operational criteria and expectations outlined in chapter 2 on theory, and continually in each of the analysis chapters. Together this will form a broad spectrum of conceptualizations of the relationship between the various theories and China’s decision to sign the Sino-Russian gas agreement.

Still, finding consistency between a theory and empirical data should not necessarily be taken as support for a causal interpretation. It could very well be a case of spurious correlation where the effect is actually caused by some unaccounted factor, or it due to an indirect effect, meaning that the hypothesis itself has no independent explanatory value (George and Bennett 2005: 185). It is also important to be aware of the fact that the attribution of observations to specific abstract concepts and to theoretical frameworks is neither easy nor possible to do in a clear-cut and purely technical manner (Blatter and Blime 2008: 327). It is therefore necessary to maintain a high level of sensitivity towards making inferential leaps between the empirical observations and the theoretically deduced explanations.

However, by applying a plurality of theories, where the rivalry between various theories function as a mechanism of control, the congruence method can reduce the danger of making unfounded inferences (Blatter and Blume 2008: 325). The most important observations will be those discriminating between two rival theories. These are cases where an observation can be used both to strengthen one theory while at the same time weakening another theory (Blatter and Blume 2008: 332). The various theories applied in the following analysis are also likely to have quite different predictions and expectations as to what might constitute the *decisive* factor in China's decision to sign the Sino-Russian gas agreement, making it easier to distinguish between when attempting to match them to empirical implications.

1.4. Outline of the thesis

The second chapter of the thesis will present what is currently known about the content of the agreement that was signed in May 2014, and what challenges the unknown part will present for the conclusions of this thesis. The third chapter will present my theoretical framework more thoroughly: a detailed explanation of the term 'hedging' and Øystein Tunsjø's hedging theory as well as a brief outline of energy security, geopolitics and liberalism. Chapter four to six will include the empirical analysis. The analysis will be divided into three different topics, which will be discussed in light of the various theories and their predictions. The topics are chosen based on the theories' main assumptions and will therefore be especially addressed to one of the explanations in addition to discussing the applicability of the hedging theory.

The first topic to be discussed is **Price and Availability**, and will be directed towards the market explanation. By analysing how the predicted price of the gas in the Sino-Russian gas agreement relates to the price of gas from other sources as well as the availability of other sources of gas, I expect to shed some light on the degree of market incentives behind the agreement.

The second topic is **Structural Incentives and Bilateral Relations** with special attention to structural concerns and Sino-Russian relations. China's relationship with Russia as been increasingly debated, and the Sino-Russian gas agreement is likely to both influence and be influenced by this relationship. How and to what extent this was a

factor in China's decision to sign the agreement of May of 2014 will be addressed in this part of the analysis.

The third topic is **Domestic Drivers**, looking into stated priorities connected to natural gas such as the environment and energy security. By looking into China's policies, commitments and priorities concerning natural gas, I hope to get a more general take on China's strategy and drive with regards to natural gas and by extension a better picture on what drove them to sign the Sino-Russian gas agreement at that particular time. Finally I will sum up my findings and conclude in chapter 7.

2. Three Theories, Four Explanations

The purpose of this thesis is to investigate the determining factors behind China's decision to sign the Sino-Russian gas agreement of May 2014. After a decade of negotiations, what changed prior to May 2014 that made the two parties come to an agreement?

As a contribution to a wider theoretical debate on energy security and energy agreements, the thesis seeks to first present the term 'hedging' and Øystein Tunsjø's hedging theory as the baseline theory that is tested against explanations derived from the more traditional "grand theories" in international relations (IR): geopolitics (realism) and liberalism/pluralism. All of these theories will have different expectations of what constitutes the decisive factor in the signing of the agreement, however, the hedging theory's alleged capability of capturing the interrelationship between security and profit renders it especially relevant and interesting for the topic of the Sino-Russian gas agreement. Even though the term 'hedging' itself is not new in political science, the theory can still be said to be at an early stage, and the analysis in this thesis will hopefully contribute to its further development as a tool in energy security research. The rest of the thesis will use the IEAs definition of energy security, which describes it as "the uninterrupted availability of energy sources at an affordable price" (International Energy Agency, 2014).

In the following chapter I will first present the theories of hedging, geopolitics and liberalism respectively. One explanation is derived from the hedging and geopolitical theory, while two explanations are deduced from the liberalist/pluralist theory. In order to make the various theoretically deduced explanations distinguishable and understandable in terms of empirical observations, operational criteria, expectations and predictions will also be presented.

2.1. "Hedging"

Often when trying to explain China's energy security policy scholars have engaged in a dichotomized debate in support of either a 'market' or a 'political' approach. However, state policy rarely adheres to one and not the other and a combination of the two is more often than not the norm in international relations.

This has been recognized by several studies that have tried to combine the two, mixing strategic and market strategies, into so-called comprehensive approaches (Tunsjø 2010: 26).

The need to combine strategic and market approaches is also apparent in Øystein Tunsjø's theory, however, he tries to go beyond just loosely mixing market and strategic aspects, adding the concept of 'hedging' to the analysis while linking it to risk management and ties (Tunsjø 2010: 28).

The concept of hedging is not new. Several scholars have used the term with a few variations, although they all appear to have some common features (Medeiros 2005-2006, Goh 2006, Tessman and Wolfe 2011, Foot 2006):

First of all, they all apply hedging as a response to *uncertainty*. Tessman and Wolfe write about the kind of uncertainty that is likely to exist in unipolar systems (2011: 216), Medeiros and Goh write about the "uncertain intentions" of other states (2005-2006: 145-146, Goh 2006), while Foot writes about a general level of uncertainty (2006: 93). Hedging is in all the aforementioned articles seen as a kind of *insurance* policy through which China seeks to secure its future (Goh 2006, Foot 2006: 88, Medeiros 2005-2006: 147, Tessman and Wolfe 2011: 216) by pursuing *two opposing strategies*. For example, by mixing strategies that stress engagement and integration methods with realist-style balancing in the form of national military modernization programs (Medeiros 2006: 145). Lastly, the articles stress that hedging is a strategy *aimed at a particular state* (most often the hegemon). This is even the case in Tessman and Wolfe's article that discusses China's energy security in particular where the United States is causing the need for strategic hedging behaviour (Tessman and Wolfe 2011).

Evelyn Goh defines hedging as: “a set of strategies aimed at avoiding (or planning for contingencies in) a situation in which states cannot decide upon more straightforward alternatives such as balancing, bandwagoning, or neutrality. Instead they cultivate a middle position that forestalls or avoids having to choose one side [or one straightforward policy stance] at the obvious expense of another” (Goh 2006). Her definition, however, says little about what hedging behaviour actually looks like, and how the concept of hedging can be used to explain actual politics and real events.

A more elaborate conceptual framework can be found in Tessman and Wolfe’s article linking hedging to systemic factors in great-power relations. They contend that China has developed a hedging strategy in order to cope with structural incentives associated with a unipolar system (Tessman and Wolfe 2011: 214). However, linking China’s energy security policies to systemic factors is unconvincing for a number of reasons. The international system became unipolar in the 1990s, but China did not develop its energy security strategies until much later (Tunsjø 2013: 24). Also, it is not clear-cut that it is structural incentives and not the CCPs own desire of self-preservation by means of continued economic growth that is the driver behind China’s energy security policy. Instead, it seems more plausible to link China’s energy security policy to concerns about a growing domestic energy shortage triggered by China’s exceptional economic growth.

I therefore argue that the articles of Medeiros (2005-2006), Goh (2006), Foot (2006), and Tessman and Wolfe (2011) all bring interesting perspectives on energy security and the concept of hedging, however, none of them are directly applicable to this thesis’ research question.

Tunsjø’s Hedging Theory

Tunsjø defines hedging as: “a strategy aiming to reconcile conciliation and confrontation in order to remain reasonably well positioned regardless of future developments” (Tunsjø 2013: 2).

Øystein Tunsjø’s theory has, as the aforementioned scholars, a basis in the assumption of *uncertainty*. China’s growing reliance on oil and gas imports has rendered it

vulnerable to potential supply disruptions and sudden price rises, and hedging is presented as a preferred strategy when confronted with uncertainty and the objective of managing risk (Tunsjø 2013: 2).

Hedging as *insurance* is also a feature presented in Tunsjø's theory. As a participant in the global energy market and a net importer of both oil and natural gas, China cannot *secure* its energy security, but it can *insure* it. This means that any risk or strategic vulnerability associated with relying on import of crude oil and natural gas cannot be eliminated, but according to Tunsjø it has the possibility to be managed by the decision makers' ability to pursue hedging strategies and policies (Tunsjø 2013: 2, Tunsjø 2010: 30). The Chinese NOCs' preoccupation with profits under normal market conditions can also provide a hedge against periods of crisis in the international market that might threaten China's energy security (Tunsjø 2013: 3). By striving for the best price and the best conditions in Chinese overseas investments the NOCs contribute to insuring against very high oil and gas prices that might negatively affect the Chinese economy.

As with the mentioned uses of the hedging concept, the feature of *two opposing strategies* is also found in Tunsjø's theory. The term "hedging" is appropriated from the financial world and refers to a situation where an actor spreads its risk by pursuing two opposite policies simultaneously. In order to limit market risk and at the same time make profit, financial investors can hedge by keeping a percentage of their portfolio on the "short" side – that is, they bet that some stocks, currencies or other commodities go down in value. Investments in "shorts" will bring in profit when there is a decline in the market over a period of time, and hence act as insurance or as a hedge when "longs" (assets that are believed to rise in value) perform poorly (Tunsjø 2013: 26). Applying the terms of "shorts" and "longs" to China's energy situation, "shorts" can refer to strategies that insure China against disruptions or disturbances that are unsecured by the general security that the international energy market provide on a long term basis by balancing itself. For example, by investing in costly oil pipelines and build up strategic petroleum reserves (shorts) while at the same time joining multilateral institutions and acting as a responsible player in the international community (longs) China can hedge against risks in the international petroleum market and leave China reasonably well off no matter how the market develops. "Longs" are usually associated

with positive developments, such as profiting from the market or preventing crisis, while “shorts” are tied to strategic and security considerations. “Shorts” insure against the possibility that instability or unexpected changes in the prices of energy resources in the international market will disrupt China’s supply security and cause social instability (Tunsjø 2013: 27).

Hedging, then, combines elements of cooperation, competition and rivalry simultaneously in order to limit risk, and balance corporate interests of Chinese energy companies against national interests (Tunsjø 2013: 26, 32).

When it comes to the last feature where a hedging strategy is presumed to be *aimed at a particular opposing state*, Tunsjø’s theory diverges from others who use the hedging term. Contrary to other theories on hedging, Tunsjø does not require there to be an opposing state to hedge against. A state can just as well hedge against unintended risk factors that could cause supply disruptions such as nature catastrophes or conflicts that has little to do with the hedger itself. In fact, Tunsjø stresses the distinction between wartime threats and peacetime risks, applying the hedging strategy to the latter (2013: 35). Very high prices on oil or gas or supply disruptions will affect Chinese economic growth necessitating “short” strategies outside of normal market mechanisms (Tunsjø 2013: 35).

The fact that Tunsjø’s theory does not require a particular opposing state that the hedging behaviour is directed towards makes it particularly applicable with regards to this thesis’ research question for three reasons; firstly, China is doing quite well in the current international system, rising by positively engaging in world order, incorporating itself into the present international system, and embracing a variety of international norms in the current world order (Guo and Blanchard 2010: 53). It is therefore not evident that China’s hedging behaviour is driven by a desire to oppose a hegemonic power. Secondly, it would seem more likely that a disruption of energy supply would occur because of unintended factors or conflicts not involving China directly. This is why it might be counterproductive to only apply hedging behaviour as a measure against military conflict or power struggles. Thirdly, China appears to strive more for regional dominance than a position as the leading world power, and hedging in

order to secure a continuous flow of energy sources and thereby securing economic growth is likely more about a need for domestic and regional stability than about an aspiration for hegemonic power.

The hedging explanation would therefore expect the decisive factor behind China's decision to sign the gas deal to be related to energy security considerations where the Chinese government, as part of a hedging strategy, were trying to diversify the country's energy mix in an effort to secure available and sufficient energy supplies at affordable prices.

In order to identify actual hedging behaviour Tunsjø writes that it is necessary to examine the domestic, global, maritime, and continental aspects of China's energy security policy and trace the hedging strategies back to the five-year and long-term plans developed by the central government in the early 2000s when China became more attentive to security issues (Tunsjø 2013: 4). In the case of the Sino-Russian gas agreement, this would mean that in order to examine whether the agreement was part of a hedging strategy it is necessary to establish that the agreement was both a market strategy to diversify China's energy sources, as well as part of a broader and more comprehensive political agenda. Exactly how this materializes in practical and clear-cut operationalizations, however, is less than clear. Drawing the line between decisions that are based "mostly" on political considerations, "mostly" on market considerations, and those that can be said to have a significant amount of both is a most subjective task. In order to evaluate whether the hedging perspective is more useful than other more well-established theories with a congruence method it is crucial to have precise criteria at hand that allow us to not only to determine whether there is a case of hedging in place, but also separate it from those narrower competing explanations. In Tessman and Wolfe's article (2011) we can find such a categorical and concrete guide.

Their operational criteria for identifying strategic hedging behaviour holds specific criteria that have the ability to separate the behaviour from that which is better identified as realist hard balancing or that which is financially motivated or based on simple power maximization. Still, their structural emphasis and focus on hedging as a

tool in interstate competition necessitates a few adjustments to make it a better fit for Tunsjø's theory.

This is why I have decided to apply a modified version of their method for identifying strategic hedging framework to my discussion. It consists of four criteria that will allow me to determine if the signing of the Sino-Russian gas agreement was part of China's hedging strategy. The first and second criterion is inspired by Tessman and Wolfe, but instead of focusing on a hypothetical conflict with a "system leader", the criteria reflects concerns about possible disruptions in the hedging states' energy supply and possible conflicts in general. The third and fourth criterion, however, are found to be equally applicable in the context of Tunsjø's version of the hedging term, and are derived directly from Tessman and Wolfe's article. Together these criteria are believed to express the meaning of the hedging term, and thus satisfy the methodological criterion of concept validity (Blatter and Blume 2008: 327). All of the criteria will have to be met for me to be able to label the signing as hedging behaviour, and not simply an instance of projection or profit maximization. In order to be considered as primarily promoted as part of a hedging strategy, the Sino-Russian gas agreement must:

1. Improve, in an observable, significant, and specific way, the competitive ability of the hedging state should a period of crisis in the international energy market that might threaten the hedger states' energy supply security or very crude oil/gas prices that might negatively effect the hedger states' and/or the NOCs economy occur.
2. Avoid confrontational or provocative behaviour such as engagement in explicit military alliances, arms races or the initiation of a militarized interstate dispute.
3. Be strategic, in the sense that it is coordinated at the highest levels of government, and that it involves an issue area that has been explicitly recognized as of major national security interest to the hedging state.
4. Involve observable domestic or international cost(s) to the hedging state, including but not limited to acceptance of significant economic inefficiencies or diplomatic backlash.

The first criterion filters out state behaviour that does not conform to the basic principles of Tunsjø's definition of hedging. That is, it limits hedging behaviour to actions that address two of the primary concerns that a state is likely to have with regards to energy security: the risk of disruption in energy supplies and/or very high oil/gas prices. If the Sino-Russian gas agreement was a result of a Chinese hedging strategy I expect the deal to address one or both of these concerns.

The second criterion is meant to filter out hard balancing behaviour better explained from a geopolitical or realist tradition during periods of wartime threats. This criterion sets the upper limit of competitive intensity that is addressed by hedging, while the third criterion, which filters out normal diplomatic friction, establishes the lower limit (Tessman and Wolfe 2011: 223).

The last criterion, stating that the hedging state be willing to incur an immediate and observable cost is a decisive way to separate hedging from cases of simple power maximization. A hedger follows a strategy by investing in both "longs and "shorts", foregoing maximum possible profit in order to manage and minimize risk (Tunsjø 2013: 26), however, if there are no cost involved in engaging in the behaviour there is no way to separate it from regular market behaviour.

2.2. Geopolitics

For a geopolitician or a realist, on the other hand, the Sino-Russian gas agreement could be seen as part of a larger geostrategic game plan. Geopolitics depicts the world as a global contest for influence and strategic resources (Ó Tuathail 2006: 1), and can be seen as a method for studying foreign policy in order to understand, explain and predict international political behaviour through geographical variables.

Geopolitics has several features in common with the certain versions of realist theories in international relations, such as maintaining states as the main actors in international relations and assuming that national security top the list as the most important issue for states (Mayer and Østerud 2014, Viotti and Kauppi 1999: 56). In

Geopolitics each state seeks its own interest and strives for power, and there is a limited belief in the significance of multilateralism, global norms or international law. There is assumed to be a military-economic competition between states for the raw materials needed for national power, and an assumption that states and alliances are able to 'balance' one another through physical occupation or by securing political influence within a geographical space (Mayer and Østerud 2014).

Since 2008 there seem to have been a reassertion of the pyramid structure of power in China, as well as a move towards tighter ideological control and Chinese nationalism (Veg 2014, Wee 2014, and the Economist 2013). A similar development has also taken place in Russia with Vladimir Putin's return to the Russian presidency in May 2012 (Herszenhorn and Buckley 2013).

In addition to the Sino-Russian gas agreement from May 2014, there have been reports of joint military exercises as well as diplomatic cooperation in the United Nations over Syria and other international issues (Harris 2014). Under President Putin and President Xi Jinping, China and Russia appear to have experienced a rapprochement with one another as both countries' ideological directions and geopolitical impulses have converged, and it has been argued that China and Russia share a general interest in curbing United States' influence on the world stage and hastening the global transition from unipolarity to multipolarity (Harris 2014).

From Russia's point of view the deal would help the Kremlin reduce its reliance on gas exports to Europe at a time when the country is burdened with sanctions from the West, and also serve as evidence that Russia has allies willing to step in when America rallies against them. Both Russia and China want to assert themselves as regional powers, and both of them have increasingly strained relations with the United States. Russia's deteriorating ties with the West could push it closer to China, and encourage an alignment against the United State which they both see as a meddling imperialist (Baker 2014).

China openly supports a multipolar world, and even if an open alliance with Moscow might not be in the cards for the time being, a closer relationship between the two could

present a profound challenge to the United States and Europe (Pogorelov 2014). According to Johns Hopkins University fellow Donald Jensen: “China and Russia can leverage the global community against the U.S. and Europe, either through vetoes at the United Nations or by using energy as a weapon.” (Gusovsky 2014) Senior analyst at Stratfor, Lauren Goodrich made similar comments: “Both are interested in a multipolar world instead of the U.S. dictating the international sphere. Neither Moscow nor Beijing can challenge the U.S. on their own, but together they might” (Gusovsky 2014).

A geopolitical explanation for China’s decision to sign the Sino-Russian gas agreement would thus centre on geopolitical considerations where the deal was part of a Sino-Russian rapprochement against the current international structure and Western domination.

In order to find and identify geopolitical behaviour Ó Tuathail suggest looking into the geopolitical discourse within a country. The geopolitical discourse within a country is shaped by its geopolitical culture, which again is formed by its state structure and geopolitical state system. Questions such as “what states are seen as friendly and what ones are considered potential or actual enemies” are expected to shape how foreign policy is conceptualized and practiced (Ó Tuathail et al. 2006: 8).

If the Sino-Russian gas agreement were in fact signed by China primarily out of geopolitical considerations we would expect to find empirical evidence such as: i) Sino-Russian cooperation in other areas, especially military and diplomatic cooperation, ii) a geopolitical discourse both at a state level and in the media pushing multipolarity as an issue of paramount importance for the Chinese leadership, iii) statements and publications indicating that the Chinese government sees the gas agreement as a challenge to United States’ hegemonic position.

Sino-Russian cooperation and other evidence indicating that a Sino-Russian rapprochement is in fact taking place would provide evidence to support the geopolitical assumption that the agreement has moved beyond merely economic profitability and into the realm of Great Power competition. The same is true for

empirical evidence demonstrating multipolarity as an issue of importance for the Chinese government. Lastly, evidence connecting the agreement itself to these more structural concerns could certainly strengthen the role of the geopolitical argument as the most plausible explanation for China's decision to sign the Sino-Russian agreement of May 2014.

2.3. Liberalism

The Market Explanation

However, when moving beyond the assumption of China as a unitary actor and rational actor primarily concerned with issues related to national security yet another view of the Sino-Russian gas agreement presents itself; namely the liberalist/pluralist argument emphasizing the importance of non-state actors such as international organizations, civil society and the NOCs. The National Oil Companies in China have enjoyed a growing degree of independence and according to a study made by the IEA "there are no cause to believe that the Chinese NOCs operate under the direct instruction of, or in close co-ordination with, the central government" (International Energy Agency 2014).

For a liberalist the state is not a unitary actor, but composed of competing individuals, interest groups and bureaucracies. Any decision in foreign policy is not made by some abstract entity called "China", but rather by some combination of actors within the foreign policy establishment (Kauppi and Viotti 1999: 199).

In liberalism, the agenda of international politics is extensive, and although national security concerns are important, liberalists are also concerned with a number of economic, social, and ecological issues arising from the growth of interdependence among states. Foreign affairs agendas of states are not exclusively preoccupied with national security issues, as many realists would have it seem, and economic and social issues can often have a direct bearing on the security and welfare of a particular regime or country (Kauppi and Viotti 1999: 200).

Assuming that the Chinese NOCs are important actors able to influence the Chinese government and promote its own agenda, it could be argued that the Sino-Russian gas

agreement was signed due to commercial interests that affected foreign policy and not the other way around. A market explanation would thus predict that the decisive factor behind China's decision to sign the gas deal was not related to political considerations, but that the agreement was simply a market case where the Chinese oil company CNPC took advantage of a lucrative business opportunity.

Empirical data that would strengthen the market explanation would include evidence that the Sino-Russian gas agreement was an advantageous deal for the CNPC and that the price on the gas was competitive compared to gas from other possible suppliers known at the time of the signing. The market explanation also assumes that the NOCs have a certain level of independence from the Chinese government. In order to argue that the Sino-Russian gas agreement of \$400 billion was signed more out of commercial interests than political incentives it is necessary to prove that CNPC was more than a political tool for the Chinese government and that they had enough autonomy to conduct the negotiations and signing of the deal on their own.

The Environmental Explanation

Domestic actors and interest groups as well as actors in the international community have recently pressured China on the issue of CO₂ emissions and air pollution. As Chinese carbon emission have continue to rise (171 per cent between 2000 and 2011), and China has taken the world lead as the world's largest carbon emitter (McGrath 2014), the country's economic growth and its impact on the environment has been put on the agenda by both the international community, domestic actors and the Chinese government itself.

As environmental degradation and air pollution mainly caused by China's reliance on coal as an energy source has taken its toll on public health and political stability, China is also seeing an increasing amount of public demonstration and attention from various interest groups. According to a comment made by Chen Jiping, a former leading member of the party's Committee of Political and Legislative Affairs, to Bloomberg News in 2013, China is experiencing between 30,000 and 50,000 so-called mass incidents every year, where the majority of them are related to environmental concerns (Bloomberg Business 2013). A lowering of life expectancy, an increasing amount of lung cancer and other

health complications such as respiratory, cardiovascular, and cerebrovascular diseases is exhausting the public's patience and igniting demonstrations (Xu 2014).

Many liberalists make an assumption of interconnectedness between domestic and international politics. Liberalists view international political processes as an extension of those conducted within the boundaries of a given state (Viotti and Kauppi 1999: 203). China's foreign policy measures could for example be viewed as an extension of or a result of political processes and competitions domestically. And China has indeed taken several steps to change the country's emissions trajectory.

At the climate conference in Copenhagen in 2009, China pledged to reduce carbon intensity by 40-45 per cent and increase the share of non-fossil energy sources to 15 per cent by 2020. At the 2013 Communist Party Plenum, China's leaders committed to reduce coal's share of primary energy to below 67 per cent by 2017, and in November last year China's State Cabinet released details of plans to cap coal consumption at 4.2 billion tons in 2020 (Sussman 2014).

In order to reduce air pollution and CO₂ emissions, China is attempting to replace some of the country's coal and oil use with natural gas (U.S. Energy Information Administration 2014). China holds significant gas reserves, particularly unconventional gas reserves in the form of shale gas, however, due to the practical difficulties in domestic production such as mountainous terrain, water shortage and limited pipeline infrastructure connecting shale gas fields, it is generally expected that China will rely on natural gas import in the near future (White and Phua 2014).

Could the natural gas deal of May 2014 be an effort from the Chinese government to alleviate the country's overreliance on coal in order to secure political stability and reduce China's levels in carbon emissions? An environmental explanation would imply that environmental considerations behind China's decision to sign the gas deal, where the Chinese government were trying to reduce its dependence on coal due to international climate obligations as well as social stability caused by protests against health problems and air pollution.

In order to determine the relevance of the environmental explanation it is necessary to analyse the extent of China's environmental problems and how China prioritizes it's the environment compared to other political issues such as energy security and geopolitics. A significant increase in social unrest and civil protests caused by air pollution and environmental degradation would strengthen the argument that China has experienced increasing pressure to demonstrate an ability to take action, and by analysing a selection of China's main policy documents I will be better equipped to see whether this has resulted in more ambitious environmental policies and official commitments on emission control. An equally significant and important factor is to analyse whether natural gas imports is promoted as a significant contributor to solving China's environmental challenges, which is the main assumption of the environmental explanation.

2.4. Summary and Implications

This chapter has presented the theoretical tools that will be applied in the subsequent analysis answering the question of what the decisive factor was when China decided to sign the Sino-Russian gas agreement of May 2014. The somewhat early staged theory of hedging is used as a baseline theory against the more established theories of geopolitics and liberalism/pluralism. Each of the theories has several interpretations. However, in each case I have tried to choose the *modus operandi* that is best suited for the topic at hand. Furthermore, I have derived one explanation from hedging and one from geopolitics, as well as two explanations from the liberalist theory called the market explanation and the environmental explanation respectively.

These explanations are merely meant as a concretization of the expectations and predictions deduced from the various theories in order to make it easier to measure the relevance and relative strength of the theories to the empirical findings in the analysis. The analysis will consist of three topics, which all in varying degrees influenced China's decision to sign the Sino-Russian gas agreement of May 2014, and therefore presents different "cuts" of the case. However, I will first provide a brief summary of the gas agreement itself and separate what we do know from what is still undisclosed.

3. The Sino-Russian Gas Agreement: The Known and Unknown

When trying to understand the drivers behind China's decision to sign the Sino-Russian gas agreement it is important to keep in mind the restrictions on information that is in place. The exact terms of the agreement have not been disclosed to the public, and there seem to be some speculations and confusion over certain details, such as the price of the gas. This chapter will attempt to disclose what is known and what is still (and is most likely to remain) unknown about the Sino-Russian gas agreement.

3.1. Background and History

The primary discussions on a cross-border natural gas pipeline between China and Russia first started in the mid 1990s, however it was not until 2004, when an initial memorandum was signed, that the parties started actively negotiating (Henderson 2014).

In October 2004 Gazprom and China National Petroleum Corporation (CNPC) signed an Agreement of Strategic Cooperation. The Agreement covered, among other things, an examination of issues related to the arrangement of natural gas delivery from Russia to China by Gazprom. Opportunities for joint gas processing and gas chemical projects in Eastern Russia and in third countries were also being explored (energyobserver.com 2012, Anishchuk 2013). Then in 2006, Russia's President Putin and his Chinese counterpart Hu Jintao signed an agreement to build two pipelines to allow the annual sale of 80 billion cubic metres (bcm) of natural gas from Russia to China, followed by a financial cooperation agreement between Gazprom and CNPC. Neither of these agreements was implemented (Koch-Weser and Murray 2014: 9).

The two sides met again in 2009 to explore the possibility of a new supply agreement to ensure the delivery of 70 bcm by 2015, and in 2010 the Extended Major Terms of natural gas supply from Russia to China were signed (Gazprom News 2014). Nevertheless, in June 2011, five-year negotiations over a 30 bcm supply deal faltered once again (Koch-Weser and Murray 2014: 9).

The causes for the deadlock included the price, the shipping route as well as the payment and investment conditions. Russia demanded prices equal to or above those it charged Europe, which China was both unable and unwilling to accept. And while Russia promoted the western “Altai” route in order to service China from the same gas fields in Western Siberia that it uses for the European market, China wanted Russia to open new gas fields in East Siberia and ship the gas to northeast China via an eastern route. In terms of payment and investment conditions the disputes centred mainly around 1) how much China would agree to prepay to support Gazprom’s initial investments; 2) what type of “take-or-pay” provision China would accept; and lastly 3) whether China would be given an equity stake in the project (Koch-Weser and Murray 2014: 10).

Some progress was made later in the beginning of 2012 with compromises from both sides followed by several important commitments in a March 2013 Memorandum of understanding (MOU) (Koch-Weser 2014: 10). Then, in September 2013 Gazprom and CNPC inked the Agreement on the major terms and conditions of pipeline gas supply from Russia to China via the eastern route (Gazprom News 2014). According to a statement released by Gazprom after the signing of the agreement, the terms “define the volumes, start of deliveries, payments, ‘take-or-pay’ amendment” and other issues, however the price of the gas was still a cornerstone issue (Anishchuk 2013).

3.2. The Signing of the deal

On the 21th of May 2014 Alexey Miller, CEO of the Russian energy company Gazprom and Zhou Jiping, Chairman of CNPC finally signed a contract to supply pipeline gas from Russia to China via the eastern route. Both the Russian President Vladimir Putin and Chinese President Xi Jinping were present at the signing in Shanghai (Gazprom News 2014).

The deal is estimated to be worth \$400 billion, and encompasses the annual delivery of 38 bcm of natural gas per year for a period of 30 years, starting in 2018 or 2019 (Buchanan 2014, Ebinger and Boersma 2014, Umbach 2014). Putin has stated that the gas deal is the “largest contract in the history of the gas industry of the former USSR and the Russian Federation” (Wan and Hauslohner 2014), and China has now risen to be Russia’s single largest trading partner (Buchanan 2014).

The contract envisages building a 4,000 km bilateral gas pipeline, called the 'Power of Siberia' (see figure 1), to China's province Heilongjiang (Umbach 2014). According to Gazprom's CEO Alexey Miller, Russia will have to invest about \$55 billion in pipeline construction, while CNPC will provide for similar infrastructure on the Chinese side of the border (Gazprom News 2014, Anishchuk 2014). Russia's willingness to ship gas via the Power of Siberia route to northeast China was certainly the biggest coup for China. However, the outlines of this clause were already agreed to in the March 2013 MOU (Koch-Weser and Murray 2014: 10). The reason behind this concession could have been hard bargaining from the Chinese, but it could also be that the Russians came to view the eastern route as beneficial as this may give them the opportunity to use some of its Power of Siberia shipments to service other customers such as Japan and Korea.

Figure 1: The Power of Siberia Gas Pipeline



The Proposed route of the 4,000 km Power of Siberia Pipeline project (Gazprom 2014)

3.3. The Price

The price that has been agreed upon has not been published, however, after signing the agreement President Putin told reports that the price formula for China is developed similar to that for Europe (Druzhinin 2014). Gazprom expected to get \$400 as a starting price for 1,000 cubic metres of gas to China, while the Chinese side was leaning more towards a price of \$350-360 (see figure 2 for various estimates).

Figure 2: Estimates of the Final Price in the May 2014 Gas Deal

Price		Sources
\$/mmBtu	\$/1,000 m3	
\$ 9.67	\$ 346.19	Gazprom source (anonymous) (Reuters, May 21)
\$ 9.78	\$ 350.00	- Arithmetic: \$400 bn, 38 bcm, 30 years - Russian Energy Minister Novak: "stated prices are close to the contract" (Interfax, May 23)
>\$9.78	>\$350.00	"Experts say it could be significantly more than \$350" (RIA Novosti, May 21)
\$ 10.61	\$ 380.00	Arithmetic: With consideration of a five-year period of increasing shipments (Reuters, May 21)

The left column shows the estimated price per million British thermal units (mmBtu), and the right column shows the estimated prices per 1,000 cubic metres (Koch-Weser and Murray 2014).

An export of the Eurasian Development Research Center of the Chinese State Council said in April of 2014 that the price of Russian gas for China would be no less than \$400 for 1,000 cubic metres, given Russia's export price of \$380 for 1,000 cubic metres. Deputy Director of the Institute of Energy Strategy Alexei Belogoryev then estimated the contract price at \$350-400 for 1,000 cubic metres, while the Director of the Energy Development Fund Sergei Pikin predicted a price of about \$380 (Druzhinin 2014). These estimates would indicate a higher price than China is currently paying for gas through the pipelines to Myanmar, Uzbekistan and Turkmenistan, which could mean a higher price than the Chinese expected. However, even with the lower estimate of \$350 for 1,000 cubic metres (which would translate to a price of \$9.78 per million British thermal units (mmBtu)) the price of the Russian gas would be higher than that of the gas that China is currently receiving from Turkmenistan (see Figure 3).

President Putin stated to the Russian news channel Rossiya in May 2014 that the price was "tied, like it is envisaged in all our international contracts with Western partners, specifically our partners in Western Europe, to the market price on oil and oil products. It is an absolutely calibrated, general formula for pricing." (BBC News Business 2014)

Figure 3: Gas Prices in the World Market and the China-Russia Gas Contract

	Sources	\$/mmBtu	\$/1,000 m3
Asia spot LNG	Spot market index (Reuters, May 21)	\$ 14.00	\$ 501.20
Gazprom to Europe	2013 average sales price (Reuters, May 21)	\$ 10.60	\$ 380.00
China-Russia deal	Consensus estimate	\$ 9.78	\$ 350.00
China from Turkmenistan	Off-take agreement, current price	\$ 9.00	\$ 322.20
UK spot	Spot market index (Reuters, May 21)	\$ 7.70	\$ 275.66
U.S. spot	Spot market index (Reuters, May 21)	\$ 4.50	\$ 161.10

Comparing the price of the Sino-Russian gas agreement to other natural gas prices on the world market. First column show price per million british thermal unit, and second column show price per 1,000 cubic metre (Koch-Weser and Murray 2014).

China's unwillingness to accept Gazprom's demands that the gas prices be linked to oil prices was the main obstacle for concluding the deal, and if the price is in fact pegged to oil and thus higher than the Chinese were expecting to pay one is left to wonder why China didn't get a better deal given their strong bargain position (Mock and Spegele 2014). Still, it could very well be that Russia has stated that the gas price is tied to oil prices in order to avoid a renegotiation of the European prices (Perlez 2014).

Nevertheless, if the price of the agreement is in fact pegged to oil, it is more conceivable to conclude that Russia attained a relatively good deal and that China had political incentives behind its decision to sign the Sino-Russian gas agreement. This will, however, be further discussed in the next chapter on price and availability when the analysis start out by looking deeper into the affordability of the Power of Siberia Pipeline and discussing the relevance of the market explanation for China's decision to sign the Sino-Russian gas agreement.

4. Price and Availability: The market argument

In order to evaluate the extent of market related factors behind China's decision to sign the Sino-Russian gas agreement it is relevant to not only look at the price of the gas in comparison to other natural gas import pipelines but also 1) the import needs that is left after domestic production and previously signed natural gas pipeline agreements and LNG agreements have covered their share, and 2) the possibility to increase the inflow of natural gas from the pipelines that is already in place. Should most of the need of natural gas already be covered by domestic production and other gas agreements, investing in expensive pipelines might appear risky and LNG imports seem like a more sensible way of filling the excessive need for gas. Another less costly alternative could be to increase the amount of natural gas imported from pipelines that have already been built, which is why it is necessary to also look into the availability of natural gas from other energy producers. Should however, the need for natural gas imports be extensive and the demand for future imports be expected to require additional imports in addition to the agreements already in place, the investment in pipelines to Eastern Siberia could make more sense to the NOC.

This chapter will therefore start by mapping out the extent of imported natural gas needed to fill China's demand after domestic production and other already signed agreements have covered their share. Due to the rapid increase in China's demand for gas, which is not expected to decline any time soon, China will have to plan for the future. It is therefore interesting to get a better picture of China's anticipated need for gas imports in future years. The Sino-Russian gas agreement is signed for 30 years, however, it is reasonable to assume that forecasts will become increasingly unreliable the further ahead they go. As a result I have decided to limit the discussion to the year 2020. This way I will get a more accurate and comparable picture, while at the same time capture whether or not there was a sense of urgency when it came to seal the deal in May 2014.

After getting a better picture of China's current and projected gas demand, I will look into the price and availability of additional supplies from producers that China already

had or was scheduled to receive piped gas from prior to May 2014, and compare the Sino-Russian gas agreement to these in order to better evaluate its affordability.

When analysing the Sino-Russian gas agreements in terms of price and availability from other suppliers the market explanation, which predict that the Sino-Russian gas agreement was a market case, stands out as especially relevant. Price and availability are also at the crux of energy security, and whether or not the Chinese government and CNPC made a lucrative deal in signing the Sino-Russian gas agreement could certainly point to the extent of political influences in signing the deal. This makes both the hedging explanation and the geopolitical explanation relevant to the discussion. The environmental explanation, however, will be afforded less space, as it is less occupied with the economic and market aspects of natural gas as an energy resource.

4.1. China's demand for natural gas imports

Despite the Chinese governments optimistic prospects for China's indigenous gas production and hopes to emulate the shale gas revolution in the United States and thus reduce its import dependence for natural gas, recent years show a continuously higher dependence on natural gas imports. By using several different sources forecasting China's future import needs I hope to get a clearer picture of how China's demand for natural gas import is expected to develop and how this might have influenced China's decision to land the Sino-Russian gas agreement of May 2014.

Neither of the theories outlined in chapter three has clear predictions on China's future demand for natural gas imports, however, looking into how the demand is likely to evolve could still provide a basis for the further discussion on the agreements affordability. Empirical evidence showing a high demand for Russian gas could strengthen the market explanation by justifying the NOCs long-term investment, while data showing little or no demand might imply that political factors closer to what the geopolitical explanation had in mind were in place. An expected continuous growing demand for imports could ensure CNPC that the pipelines they invest in will be in demand and used to transport gas to consumers, while the opposite could strengthen the argument that the Sino-Russian gas agreement was signed due to political concerns.

The hedging- and environmental explanations might imply a current demand that creates a sense of urgency, due to energy security or environmental concerns respectively, however, neither explanation have any predictions for future import demands.

Up until now China's natural gas consumption rate has grown faster than its production rate (see figure 5 on page 75). China more than tripled natural gas production to 3.8 Tcf (trillion cubic feet) between 2002 and 2012, while total consumption in 2012 rose to nearly 5.2 Tcf, 11 per cent greater than the preceding year. To fill the gap, the country imported nearly 1.5 Tcf (42.5 bcm) of LNG and pipeline gas (EIA, February 2014: 17). By comparison the state of Texas alone consumed 4,02 Tcf of natural gas in 2013 (while United States consumed 26,13 Tcf in total), giving some idea to China's room for growth when it comes to natural gas consumption (U.S. Energy Information Administration 2015).

Looking at future prospects for China's need for natural gas imports it is reasonable to assume that different sources will have different estimates. In order to capture what might come closest to the forecasts that the Chinese government and NOCs had to take into account when deciding to sign the Sino-Russian gas agreement of May 2014, I have decided to rely on three different accounts; a respected and well-known international law firm, an agency of the U.S. Federal Statistical System and a non-governmental Chinese think-tank situated in Hong Kong. By using these sources, which are likely to have different bases and beneficiaries, I hope to cover a wider range of opinions regarding China's future gas import demand.

King & Spalding, a law firm with more than 250 energy lawyers around the world and publisher of "King & Spalding's Energy Newsletter", states that China's future natural gas consumption and imports are set to grow substantially. Citing The National Development and Reform Commission of the People's Republic of China (NDRC) estimates, they stipulate that consumption is likely to reach 400 bcm in 2020 with import dependence exceeding 40 per cent (which would translate to around 160 bcm of gas imports)(White and Phua 2014). However, they also underline how projections for

future Chinese gas importation can vary considerable in degree, depending on projections of future Chinese gas demand and domestic production. Still, even under a favourable unconventional production scenario, they state that estimated overall imports in 2020 would be 50 per cent higher than present day levels (White and Phua 2014).

A report from January 2014 by U.S. Energy Information Administration (EIA) reports that China will experience the largest growth in natural gas demand with an average rate of 7.5 per cent in natural gas consumption from 2010 to 2020, while production will grow by an average of 2.4 per cent per year (EIA, January 2014). In order to meet this demand EIA predicts that China will have to continue to import natural gas in the form of LNG and “from a number of new and proposed import pipelines from neighbouring countries” in addition to further investments in domestic production (EIA, February 2014).

China Energy Fund Committee (CEFC), a nonpartisan Chinese think-tank with Special Consultative Status with the United Nations Economic and Social Council (UN ECOSOC), also forecasts a rise in China’s future gas imports. Professor Larry Chow Chuen-ho, Director of the Hong Kong Energy Studies Centre, states that China will “undoubtedly continue to increase the import and use of natural gas in the future”. Citing the Director of the Centre of Oil and Natural Gas Strategy, Pan Jiping in the Ministry of Land and Resources, he forecasts that China’s volume of imported natural gas will reach 150 bcm by 2020, making up 40 per cent of total natural gas consumption (Chow 2013: 143), which is not far off from what King & Spalding projected.

All three reports forecasts a significant growth in natural gas consumption and import by 2020. They all also raise serious concerns when it comes to the need to increase China’s energy security due to its growing reliance on foreign natural gas, as well as doubts to whether domestic supply is likely to reduce the country’s growing demand for natural gas imports (White and Phua 2014, EIA February 2014: 17 and Chow 2013: 128).

The consensus on China's current and future need for gas imports provides support for the explanations which predicts that the agreement was signed due to reason related to the country's need for natural gas, while weakening the argument made by the geopolitical explanation that states other more structural concerns as the decisive factor. However, in order to better understand why China chose to sign the Sino-Russian gas agreement to counter this further increase in demand for gas it is necessary to look into the price and availability of other sources of natural gas.

4.2. Russian gas vs. alternative suppliers of natural gas

"The Chinese drank quite a bit of our blood", President Putin joked when he met China's Vice President Li Yuanchao after the signing of the Sino-Russian gas agreement (The Brics Post 2014). By this he insinuated that the Chinese negotiators knew how to take advantage of Russia when it faced challenges that had weakened its dominant role in the global energy market and was in need of a reliable strategic partner. This part of the analysis seeks to investigate whether China did in fact get a bargain deal, comparing it to other available sources of natural gas in order to evaluate the extent of market incentives behind China's decision to sign the Sino-Russian gas agreement.

On the matter of price and affordability, the hedging, geopolitical and market explanation, respectively, could be envisaged to constitute a continuum where the market explanation would imply a fairly low price in comparison to other available alternatives, while the geopolitical explanation would imply a high price. The hedging explanation would be somewhere in between.

The market explanation would be strengthened if the Chinese NOCs could expect to make a bigger profit by signing the Sino-Russian gas agreement than if they invested their money somewhere else. Investigating all other viable investment opportunities for CNPC is beyond the scope of this thesis. Still, in order to support the statement that the Sino-Russian gas agreement was signed without attention to nonmarket considerations we should at least expect the gas to be cheap. However, if the Russian gas were cheap, here defined as purchased at a lower price than the price of other available sources of

natural gas imports, significant concessions would have to have been made by Gazprom since previous negotiations on the Sino-Russian natural gas pipeline.

The hedging explanation, on the other hand, would imply that the price of the gas was high enough to involve a significant cost for the Chinese government, but not so high as to make the pipelines a liability. According to one of the hedging criteria listed in chapter 2, the pipeline should cause an improvement in the competitive ability of the hedging state should a crisis occur in the international energy market, however, if the pipeline were expected to create a surplus for the NOC then a hedging strategy would not be necessary to drive the negotiations forward.

The geopolitical explanation, looking for structural incentives behind China's decision to sign the Sino-Russian gas agreement, would be strengthened by a high enough gas price to point to priorities other than those related to natural gas and energy security.

Gas at a Bargain Price?

Even though the price of the gas that will eventually be piped through the Sino-Russian gas pipeline in East Siberia has not been revealed, there have been some educated guesses as to what it might be. The full worth of the deal is known to be \$400 billion over a period of 30 years, starting in 2018. Analysts from the think-tank The Brookings Institution estimate that the price paid by China for delivery to its border is about \$10-11/mmBtu (Ebinger and Boersma 2014). This is the same estimate that is reported by the Oxford Institute of Energy Studies (Chen 2014: 9), master candidate Tingting Tang from Duke University (2014: 20) and White and Phua from King & Spalding (2014). A price of \$10/mmBtu would, due to transmission tariffs, bring the price to about \$12-13/mmBtu to eastern China where it is most needed (Ebinger and Boersma 2014, Tang 2014: 20).

This estimate would make the price of the Russian gas close to the weighted average price of pipeline imports and LNG, which was around \$10.4/mmBtu and \$10.5/mmBtu, respectively (in 2013) (Chen 2014: 9). Comparing the price to the prices of natural gas pipeline imports from other suppliers to China individually, we can also see that the gas from Russia is placed somewhere in the middle. In 2013 piped gas from Turkmenistan

had an average price of \$9.94/mmBtu, Uzbek gas a price of \$8.63/mmBtu, while gas from Myanmar had a price of \$11.68/mmBtu (White and Phua 2014). Kazakhstan gas, which constituted less than one per cent of overall pipeline supply to China, cost no more than \$3.35/mmBtu (Tang 2014). The gas from Turkmenistan was slightly above other Central Asian contracted gas owing partly to transit fees that are paid to Uzbekistan and Kazakhstan, while the price of gas supplied from Myanmar can be explained as a result of the harsh terrain that the pipeline has to cross en route to China (Chen 2014: 8).

When comparing the price from the Sino-Russian gas agreement to other supplies of pipeline gas it is important to keep China's geography in mind and the costs involved in transporting the gas to the eastern and north-eastern provinces that the Russian gas is meant to supply. Table 1 below gives an indication of the costs of transporting different supplies of natural gas to the east coast. We see that the Russian gas comes out as the least costly among the pipeline supplies, but that the average price of LNG imports is the lowest (without including the regasification costs). These figures, which are derived from an article by James Henderson from Oxford University, show the estimated cost for transporting the gas to Shanghai on the East coast. However, transporting the gas further north to the north-eastern provinces, which is likely to be the primary beneficiaries of the Russian gas, would cause the price differences between the Russian gas and the other sources of piped gas to be even bigger. The price of the Russian gas thus appear to be within what China could perceive as advantageous, but was it the bargain that the market explanation foresaw? Given that the deal probably did not involve equity participation in a Russian gas field for CNPC, something Chinese negotiators had reportedly sought, the price level in the agreement rather seem to reflect a win-win situation where both China and Russia have reason to be satisfied.

It is also important to mention China's regulated prices, which causes the residential end-user gas prices to be lower than the import prices of gas. The prices are kept low to avoid triggering high inflation rates (Corbeau et al 2012: 22). Even though the Chinese government compensates the NOCs for some of the losses they have selling natural gas in the Chinese market, a *bargain price* is what is necessary if they are to make a profit from it. CNPC is reportedly already losing money on Turkmen imports, and in 2012 its

imported gas segment posted a loss of 42 billion yuan (Corbeau et al. 2012: 19, Kaixi 2013). Paying an equal or even higher price for a new project requiring heavy investments while probably not getting an equity share might not seem like a lucrative business opportunity for the major oil company.

Table 1: China Imported Gas Prices

	Price at entry to China	Transport to Shanghai	Price in Shanghai at City Gate
	<i>US\$/mmBtu</i>	<i>US\$/mmBtu</i>	<i>US\$/mmBtu</i>
Turkmen price in West China	9.60	4.48	14.08
Russia East Siberia Gas	10.00	2.50	12.50
Average LNG imports (2013)	11.10	0.00	11.10
Qatar LNG (spot)	17.76	0.00	17.76
New Australia (from 2015)	15.77	0.00	15.77
US LNG (HH \$5/mmBtu)	12.75	0.00	12.75
Myanmar imports	11.75	1.85	13.60
Shanghai domestic price (incremental)	14.25	0.00	14.25
Shanghai domestic price (existing)	10.50	0.00	10.50

The table shows a calculation of the cost of transporting imported natural gas from its respective entry point into China to Shanghai on the East coast. (Henderson 2014)

Infrastructure and Alternative Supplies

In addition to the price issue, transporting gas by pipelines from other parts of China would also need to overcome the challenges of the north-eastern provinces less developed pipeline infrastructure, which is less developed than the areas south of Beijing (see Figure 6) (White and Phua 2014). In fact, even though the gas transmission network in China is expanding fast, the general length of the network is still low compared to annual demand. China had over 50 000 km of long-distance gas transmission pipelines in 2011. By comparison, Germany alone had 117 000 of high pressure gas transmission pipelines at the end of 2009. It also had lower consumption

of gas than China (97 bcm in 2010) and a geographical area of only 4 per cent that of China (Corbeau et al. 2012: 27). Occupying long stretches of pipelines in order to transport gas from the West or South of China all the way to the north-eastern part could therefore prove to be an unfeasible task, both economically and practically.

Importing Russian gas from East Siberia thus appear to be a more reasonable alternative than importing piped gas from other suppliers both with regards to affordability and availability.

Figure 6



Map showing China's natural gas infrastructure.

Still, looking at Table 1, Russian gas appears to come in second in terms of price, after possible LNG supplies. This is, however, due to certain lucrative deals, such as the deal signed with Australia in the early 2000s with the very attractive price of below \$5/mmBtu, and is not an indicator for what China could hope to get now as an alternative to the Sino-Russian gas agreement (Chen 2013: 34). The expensive Qatari

long-term contracts has surpassed that from Australia, and looking at the existing long-term contracts that Chinese buyers have signed for LNG projects we see an upward price surge: all the new cargoes coming on board from 2015 and onwards have the price level of approximately \$15/mmBtu or more (given an oil price of \$100/bbl) (Chen 2013: 35). Spot LNG imports go even higher, and is usually bought to balance seasonal demand (Chen 2013: 36).

Nonetheless, with the cheap North American gas becoming available at \$3/mmBtu (reaching \$11/mmBtu at the Chinese east coast when adding the costs of liquefaction, transport and regasification) LNG could still appear like an attractive alternative to pipeline investments for the Chinese NOCs (Chen 2013: 37). LNG is also beneficial in terms of logistics given that the major consuming regions are concentrated in coastal areas (Mitrova 2014: 15).

Diversifying away from LNG in the coastal areas, which are the main consumers of natural gas, does however come with its own reward. As previously stated, LNG and pipeline gas have different security implications, and both the Chinese government and the NOCs have reasons for wanting to be less dependent on LNG (Tunsjø 2013: 85). Currently the NOCs are quite heavily reliant on supply sources from the Middle East and Africa, regions that have experienced an increasing amount of turmoil and disturbances in recent years and they are eager to diversify (Jiang and Sinton 2011: 14-15). The Chinese state have similar concerns and are also concerned about U.S. control of the international shipping lanes that are needed for both oil transport and transport of LNG (Cao and Bluth 2013). Signing the Sino-Russian gas agreement out of concerns for China's energy security by hedging against possible supply disruptions at sea would conform with the hedging argument. However, the question remains whether China acted as a unitary actor in this case or if CNPC, as a commercial actor, acted in its own interests. Could CNPC have chosen not to enter into the contract if it was not in their interest? In order to strengthen the market explanation the answer to this question would have to be "yes". It is therefore necessary to have a brief discussion of the NOCs level of independence from the Chinese government before evaluating the extent of market incentives behind the Sino-Russian gas agreement.

4.3. NOCs level of independence

An information paper issued by the IEA from 2011 states: “While China’s NOCs are majority-owned by the government, they are not government-run. Their observed behaviour is the result of a complex interplay between individuals and groups associated with the firms, and whose interests are not always aligned, and where commercial incentive is the main driver” (Jiang and Sinton 2011: 7). The paper further states that the NOCs appear to have a high degree of independence from the government, and even go so far as to say that they have a great deal of power vis-à-vis the government, thanks to their historical association with former ministries, the high rank of the NOCs top leaders within the CCP and the sheer size of their organisations and capacities compared to the government agencies that oversee them (Jiang and Sinton 2011: 7, 25).

However, an updated publication of the article from 2014 stresses that events between 2011 and 2014 have politicised a number of Chinese NOC investments, and that the NOCs business interests are now highly dependent on how China’s foreign policy evolves (Jiang and Ding 2014: 8).

In his book on China’s energy policy, Øystein Tunsjø also characterizes the Chinese NOCs as largely autonomous and competitive actors pursuing profits in their daily activities. Yet he contends that: “their corporate interests cannot undermine the overarching government objective of providing energy supply security” (Tunsjø 2013: 6). He states that even though the NOCs are better staffed, often have more in-depth expertise, and occupy more resources than China’s governmental energy institutions, they are also depend on support from the Chinese government in order to be successful (Tunsjø 2013: 6, 40). The NOCs need the NDRCs approval for overseas investments exceeding \$30 million, and those over \$200 million must be reviewed by the NDRC and then submitted to the State Council for approval, something that functions as a clear control mechanism from the government. The government also maintains leverage through credit from the state-owned banks, and has the power to appoint and remove the top leaders, managers, and members of the boards of directors of the NOCs and their subsidiaries (Tunsjø 2013: 42). This would mean that the NOCs would have a difficult

time engaging in commercial activities that had the governments disapproval, but what about investments that the government was advocating? Could the NOCs refuse to engage?

Tunnsjø writes that the NOCs, because of high costs and limited profitability, initially did not favour investments in cross-border pipeline projects (referring to pipeline projects prior to the Sino-Russian gas agreement). Still, the Chinese government has actively been pushing for cross-border pipeline investments, and natural gas imports by pipelines can now be said to constitute an import part of China's strategy to enhance its energy security. Tunnsjø therefore argues that the government both has the power and the ability to initiate energy security strategies and policies that oppose the business strategies of the NOCs (Tunnsjø 2013: 43).

With the substantial leverage that the Chinese government has over the NOCs and the slim opportunities for a substantial profit for CNPC it is difficult to argue that the energy company had much of a choice when time came to sign the Sino-Russian gas agreement. The presence of high-profiled actors at the negotiation-table since the negotiation-process started in 2004 and the sheer size of the deal also makes it unlikely that the NOC had the opportunity to decline. Still, given the interchange of actors in the leadership of the Chinese government and CNPC respectively it is also likely that there has been a confluence of interests and that the deal constituted a long-awaited opportunity also for the CNPC.

4.4. Summary and Implications

In this last part of the analysis covering the topics of price and availability I have discussed the amount of market incentives behind China's decision to sign the Sino-Russian gas agreement. I started out by looking into the extent of China's need for natural gas imports with the argument that a lack of demand for gas imports would be a natural impediment to commercial drives as the decisive factor in China's decision to sign the deal. My findings, however, were that China is in fact likely to expect a continuous increase in its need for natural gas imports, and that the Russian gas will be in demand many years into the future.

The analysis then continued by looking into the price of the Russian gas compared to other available supplies of piped gas in particular but also LNG. Using educated estimates of the price of the Russian gas from several sources, the analysis found that the price of the gas from the Sino-Russian gas agreement was slightly above the price of the Turkmen supplies at the Chinese border, but lower than the price of Myanmar gas and most supplies of LNG. It thus appears as if both China and Russia can present themselves as the winner of the negotiations to domestic and international audiences, and that the price was less of a bargain than the market explanation expected it to be. Comparing the Russian gas to other available supplies to the eastern and north-eastern region of China, which the gas from the Power of Siberia pipeline is most likely to cater, the price and availability becomes more market-friendly. This is partially due to the costs involved in transporting the gas from different locations across the country, but also because of the lack of infrastructure in place.

A pipeline connection to Russia would also increase China's level of energy security by reducing an overreliance on sea-borne natural gas supply in the form of LNG. This is important both for the Chinese government and the NOCs involved in the Chinese downstream market. The deal could thus appear advantageous for both the Chinese government and CNPC, and the market explanation, which imply that market incentives are the decisive factor behind China's decision to sign the Sino-Russian gas agreement could still stand as a plausible explanation. However, inherent in the market explanation is also an assumption that CNPC was the main actor taking advantage of a lucrative business opportunity, and thus have a high degree of independence from the Chinese government. When analysing this very issue in the last section of the chapter it does indeed seem like the NOCs is acting as independent actors when operating far away from home conducting deals on a smaller scale, however, the size and political issues involved in the Sino-Russian gas agreement makes it unlikely that CNPC acted as the main actor promoting market interests when the deal was negotiated and signed. The market explanation is therefore, ultimately, weakened.

The geopolitical explanation, implying factors unrelated to gas as an energy resource instead focusing on more structural factors on a higher level, is also weakened by the

findings of this chapter. Both the expected need of continued natural gas imports, the relatively reasonable price of the gas and the lack of affordable alternative supplies to the north-eastern region of China gives reason to believe that the enhanced supply of natural gas was in fact the main reason behind the long-awaited signing of the deal.

Throughout the discussion the hedging explanation connecting the enhanced supply of gas to energy security considerations, appear to be strengthened. The need for continuous natural gas supply, the win-win aspect of the price of the gas and the increased security of supply – both due to diversification of suppliers, but also because of the lessened reliance on LNG and sea-borne gas routes appear to support the first hedging criterion of *improving China's competitive ability should a period of crisis in the international energy market occur*. CNPC's seemingly lack of independence from the Chinese government on the matter also increases the plausibility that the deal was coordinated at the high state levels, and thus constituted an issue area that is recognized as of major national security interest to the Chinese government. This also corresponds with the hedging explanations third criterion.

Having analysed the Sino-Russian gas agreement in terms of price, finding the market explanation improbable, the next chapter will continue by looking at incentives outside the realm of energy and natural gas per se, and into China's possible structural aspirations. Could it be that the Sino-Russian gas agreement was less about securing an inflow of natural gas and more about consolidating an opposition to U.S. unipolarity?

5. Structural Incentives and Bilateral Relations: The geopolitical argument

Discussions about Sino-Russian relations are on the rise and have recently attracted the attention of experts and policy-makers around the world as well as the media and the general public. China and Russia are arguably two of the biggest players in the international system and their partnership already possesses great geopolitical weight. However, does this partnership have the plausibility to evolve into a counterweight to the United States and its allies and challenge the current world system characterized by unipolarity? And to what extent did structural incentives and the desire to oppose U.S. hegemony play a role in China's decision to sign the Sino-Russian gas agreement?

According to the geopolitical explanation outlined in chapter two, structural incentives and a desire to change the current international system were the main drivers behind the Sino-Russian gas agreement of May 2014. In the following chapter the plausibility of this explanation will be discussed by looking into Sino-Russian bilateral relations and China's apparent predilection for a multipolar world order.

Both the geopolitical and hedging theory have a tendency to view bilateral relations and partnerships between states as part of a larger agenda; however, they also have some differences in terms of how they envisage that these relations develop as well as to what extent they expect them to affect other political areas.

In order to better address this complex topic the chapter will be divided into three subsections. The first will examine Sino-Russian relations historically, while the second will look into its current status and future prospects. The third subsection will discuss the term multipolarity, and what priority the Chinese government give the need to change the current world structure. Is China serious about the need to challenge U.S. hegemony or is multipolarity merely a term used to promote Chinese interests diplomatically?

5.1. Sino-Russian Bilateral Relations: Historical Backdrop

In order to get a better understanding of the actual state of China's relationship with Russia and how this is likely to evolve it is necessary to look at how it has developed over time. This will both help to discern any underlying factors that have the possibility to facilitate a lasting partnership between the two states, as well as identify possible pitfalls in their seemingly warming relationship.

Looking back at the history of Sino-Russian relations we can discern a tale of misunderstandings, prejudices and mutual underestimation. Prior to the communist revolutions neither country took the other's civilization very seriously and contacts between the two were meagre (Rozman 2014: 215). However, after the establishment of the Soviet Union and People's Republic Of China respectively, an alliance was made between the two states (Gerson 2010: 18). Despite a certain degree of personal distrust between leaders and restricted access to each other's society, China was depicted as following in the footsteps of its "older brother", emulating the Soviet Union towards a classless society. According to Professor Ted Hopf from the National University of Singapore, the alliance reached in 1949 was premised on a hierarchical order, where Joseph Stalin "accepted China as a subordinate vanguard championing colonial revolution, while showing leniency to its underdevelopment as it followed in the evolutionary path blazed by his country" (Rozman 2014: 215-219). However, the unequal relationship did not survive for long, and as early as 1955 signs of disunity could be seen. In addition to disagreements over the Stalinist socioeconomic development model and communist ideology the two also had different views on how to deal with the West and the correct method of dealing with imperialism (Lüthi 2008). The pretence of a common ideology could not survive the anger at the rejection by China when the Soviet pulled rank, and Soviet intolerance of China's response (Rozman 2014: 219).

For the next three decades Sino-Soviet/Russian relations was characterized by intense attacks on each other's heresy, ideology and accusations of the other part seeking hegemony in Asia (Rozman 2014: 223-224). In fact, in 1969 the hostilities came to physical confrontation due to disagreements about the delineation of the East Sino-Soviet border, which had not been an issue when bilateral relations were good (Gerson 2010: 22). The delineation of the border had always been a point of contention for

Beijing even though the disputed territory itself was uninhabited and strategically meaningless, and it continued to be a matter of contention in the Sino-Soviet relationship decades after the conflict (Gerson 2010: 22).

It was not until the death of Mao Zedong and the fall of the Soviet Union that the Sino-Russian enmity began to lessen, and on December 23, 1992 Russian President Boris Yeltsin made his first official visit to China. However, the Sino-Russian relations continued on a rough path with several incidents dividing the two nations, even though they appeared to agree on foreign policy issues such as North Korea and were on similar journeys with regards to the dismantling of communism and the entrance into the world economy (Rozman 2014: 227-228).

What essentially brought the two countries together was their resentment towards a United States-centred international community and standards of civilization that judged their denial of civil society. This convergence intensified after Xi Jinping and Vladimir Putin took presidential power, which according to Gilbert Rozman, both are likely to hold until the 2020s (2014: 245). By this time China had entered the WTO, with Russia following suit in 2012, and the two nations had come to an agreement with regards to their border issues. Putin's priorities as president were welcome in China, because he hurried to rebuild a strong centralized state and took a firm stand regarding Russia's identity vis-à-vis the West and the principle of non-interference (Rozman 2014: 249).

With a growing ideological convergence, similar views regarding hotspots such as North Korea, Iran and Syria and increasing military exercises the question of whether we will be witnessing a formal Russia-China alliance presents itself. A budding alliance would certainly strengthen the geopolitical argument, which emphasized structural incentives behind China's energy policies and decision to sign the Sino-Russian gas agreement, and indicate a significant change in the current world structure.

Nevertheless, even though there appear to be several publications and media articles raising the issue of an incipient alliance, there also seem to be a consensus on the conclusion that a formal alliance between China and Russia in the foreseeable future is less than likely, and not desired by either of the two parties. Even though there are

some Russians who call for an alliance with China, as some do in China, especially military analysts, China is not really prepared to face the United States in this manner, and Russia would be held hostage if, for example, China decided to start a war over Taiwan (Rozman 2014: 272). Neither of the two countries appears to pursue such a binding agreement, as both want flexibility in their foreign and security policies. There have also been arguments that the incentives for forming new military alliances in the current unipolar order is low, as states tend to prefer different types of bilateral partnerships (Røseth 2014: 842).

Looking at the historical patterns in the Sino-Russian relationship and contentious areas among them, as well as statements from established researchers and the media, it seems reasonable to conclude that a partnership with Russia are more in line with China's geopolitical interests, and that a formal alliance was not what drove Beijing to sign the Sino-Russian gas agreement. This inference is mostly based on secondary literature, historical accounts and opinions from Western academics who has specialized themselves on Sino-Russian relations. Another approach could be to rely on Russian or Chinese historical sources and accounts, however, both China and Russia has everything to gain to downplay previous disputes and hostilities and present a united front while trying to cement their energy agreements and commercial relations. Academics within Russia and China also has less leverage to present historical facts or opinions that diverges from that of their official governments, which could result in a biased account of their historical relations. My own lack of language skills in both Chinese and Russian has also restricted the sources of the thesis to mostly English-speaking accounts. For these reasons I have decided to use a variety of authors and sources that I believe to be the least biased with the risk of over-relying on secondary accounts.

The conclusion that a formal alliance is not in the cards for Sino-Russian relations in the imminent future, and that this was not what drove China to sign the Sino-Russian gas agreement could potentially strengthen the hedging explanation. If the agreement were to have been signed as a step towards a Sino-Russian alliance it is likely to have been perceived as confrontational behaviour by other actors, and could therefore not have been regarded as hedging. The hedging explanation would therefore predict an alliance

as unlikely. However, before evaluating the respective theories it is necessary to ask the question of what kind of partnership the Chinese government aspire to have with Russia. And what kind of partnership is plausible to have? And lastly: what will a lasting Sino-Russian partnership mean for China and the current unipolar system, if anything?

5.2. Sino-Russian bilateral Relations: Outlook for a strategic partnership

In the further discussion of the kind of partnership that China has and aspire to have with Russia the hedging and geopolitical hypotheses are likely to have different expectations. The geopolitical explanation implies patterns of continuous cooperation between the two states, both economically, diplomatically and military. The hedging explanation, on the other hand, would be supported by a mutually beneficial partnership that would leave it free and able to pursue deals and agreements with any country without being restricted by an alliance with a country that has a history of diplomatic problems and sanctions from the international community.

There have been those expressing concern that the apparent rapprochement between Russia and China is a charade: a temporary marriage of convenience in order to accelerate the decline of U.S. relative power (Grigg 2014, McDermott 2014). However, if the partnership between the two states is a lasting one, the geopolitical explanation would look for signs of a Sino-Russian bloc against the United States: a confluence of ideology and national interests as well as similarities in statements about how the United States and the West is viewed and how they are to be handled. The amount of suspicion and tension between China and Russia would be expected to decrease, while the suspicion and enmity towards the United States and its allies would increase.

The hedging explanation, however, while also expecting the Chinese government to keep good relations with Russia, expects them to keep their options open for positive relations with Western powers such as the United States and the European Union. China would want to avoid confrontational and provocative behaviour that could burn bridges for future cooperation, and instead cultivate good relations on all fronts.

In order to better evaluate what kind of partnership China has and desire to have with Russia I will utilize Martin A. Smith's conceptualization of partnerships among states. Smith categorizes partnerships into three ideal-type categories: *pragmatic*, *strategic* and *normative*, however, he also emphasize that a partnership can contain a mix of the different categories, that it may be a different type of partnership depending on the policy area, and that the types are not mutually exclusive (Røseth 2014: 842-843, Smith 2006: 112).

The first type, the *pragmatic* partnership, is a tactical and temporary partnership where national interests and security concerns are the main drivers while the partners are preoccupied by the relative power of the other. The partners are willing to cooperate on issues that may be advantageous for both, but zero-sum considerations are a continuing part of the relationship (Røseth 2014: 843). This means that policy makers on each side will be concerned that potential gains for their 'partner' may turn out to be losses for themselves. A pragmatic partnership may therefore turn out to be a tactical and ultimately temporary arrangement, rather than being more profoundly significant and enduring (Smith 2006: 112).

The second type, the *strategic* partnership, goes somewhat deeper, indicating agreement about the overall nature of international relations and the best way to respond to potential external threats. This kind of agreement provides long-term common interests and equips the parties involved with an underlying stability. In a strategic partnership there are win-win considerations on most bilateral issues, however, the partnership is not entirely immune to shifts in national interests and (mis)-perceptions about the other state. Still, what mainly characterizes the relationship is a breadth of cooperation and bilateral conditions for strong and sustainable partnership (Røseth 2014: 843, Smith 2006: 112).

A third type is the *normative* partnership where the parties agree on a "common set of norms, values and standards", and that these shared values give an understanding for scrutinizing the other states internal and external policies and norms (Røseth 2014: 843, Smith 2006: 112). This kind of partnership has, however, not been observed nor been placed on the agenda for the future by any of the two states and is therefore

excluded from the discussion. In fact, Rozman points out Sinocentrism and Russocentrism as rising themes in the respective countries' national identities, which could pose a threat to further bilateral relations (2014: 1).

In evaluating what kind of partnership that China and Russia currently enjoy, it can be useful to look at three areas that can be characterized as especially relevant for a potential lasting partnership: *economic*, *political* and *military* cooperation.

In 2001, China and Russia signed the Treaty of Good-Neighbourliness and Friendly Cooperation, which institutionalized a strategic link between the two countries and reinforced bilateral economic cooperation (Sidorenko 2013). Since then the Sino-Russian economic cooperation and trade relation have risen continually (with a significant drop in 2009 due to the international economic crisis) reaching a record high of \$59.1 billion in the first half of 2014 (Ilnitsky 2014). The main articles exported by the Soviet Union to China had been machinery and equipment, steel, mineral fertilizers, timber and aluminium, whereas China's export to the Soviets was mainly consumer goods and foodstuffs (Kumar 2013: 4). Two decades later, during the first half of the 2010s the structure of exports between the two countries had changed markedly. Now the Russian exports to China mainly consisted of raw materials, energy products and low value added goods, whereas China's exports to Russia are machinery and equipment, clothing, footwear and cars (Kumar 2013: 16), indicating a potentially lopsided trading relation.

The rapid increase in the two countries bilateral trade level, as well as recent large Chinese investments in energy like the Rosneft-CNPC \$270 billion oil deal in September 2013 and the Gazprom-CNPC \$400 billion gas deal from May 2014 (Gusovsky 2014), during a difficult financial time for Russia could imply that the ties between Russia and China is getting better on the ground of their economic relations. However, according to Bobo Lo, the head of the Russia and Eurasia Programme at Chatham House in London, the two sides diverge in their objectives and capabilities with regards to trade and economic cooperation (2008: 85). Moscow hopes that China will become an economic, as well as a political and strategic, counterweight to the West, while Beijing sees Russia as "little more than a resource-cow for Chinese growth" (Lo 2008: 85). The unequal

nature of the economic relationship has caused the Russian government to complain about the “unbalanced” nature of bilateral trade. At a summit in Beijing in 2006, Putin reportedly remarked on “the raw materials bias of Russian exports to China” (Lo 2008: 85). Russian officials have also sought preferential treatment to boost Russian exports of machinery (civilian aircraft, nuclear reactors, hydroelectric turbines, etc.) without success (Bellacqua 2010: 64). Also worrying for Moscow is that the terms of trade are becoming more uneven every year, and Chinese exports to Russia appear to grow at a much higher speed than Russian exports to China (Lo 2008: 85-86). Even though China is Russia’s second largest trading partner, Russia only ranks as number eight for China, with just 2 per cent of China’s total trade volume (Feng 2015). While the increasing amount of economic cooperation, and the long-term prospects inherent in the recent Sino-Russian energy deals could indicate a step towards a strategic partnership, the highly imbalanced nature of China-Russia makes it difficult to describe it as a strong sustainable partnership. The fact that China has little interest in making Russia a relevant trading partner in other areas than those that appeal to China’s core interests, such as military equipment and securing a steady supply of energy, gives the partnership a more tactical impression which corresponds more closely to the descriptions of a pragmatic partnership.

In political and military cooperation there have also been an increasing amount of activity. Old border disputes have been resolved, and the frequency of meetings between top leaders has increased (Mankoff 2013). China and Russia have cooperated in the United Nations over hot-spot issues such as Syria, Iran and North Korea, both countries are committed to non-interference in internal affairs, and they both share an aversion to a unipolar world dominated by the United States (Rozman 2014: 251).

Despite a decline in arms sales since 2007, there has also been an increasing amount of military cooperation during the last couple of years. Russia and China are engaging in military exercises, both bilaterally as well as in coordination by the Shanghai Cooperation Organization (SCO), which was founded as a regional security organization by China, Russia, Kazakhstan, Kyrgyzstan and Tadjikistan in 1996 (Hille 2014). There have also been statements by high-ranking officials indicating closer cooperation on security issues, such as China’s Defence Minister Chang Wanquan’s call for joint efforts

to bring military relations “to a higher level” (Tiezzi 2014). Despite this, the cooperation between the Russian and Chinese militaries does not seem to change the fact that there is a significant amount of mistrust between the two states. Russian military commanders acknowledge that they see China as a potential foe, even as official statements continue to focus on the alleged threat from the U.S. and NATO (Mankoff 2013).

Moscow and Beijing characterize their relationship as a comprehensive strategic partnership, however, the collaboration also masks serious differences, and in parts of the world that matter most to them, Russia and China are more rivals than allies.

For China, for example, Southeast Asia is of paramount importance. Territorial disputes over the waters and islands of the South China Sea, Taiwan and the importance of ensuring the region's sea lanes has long been on top of China's agenda. However, the territorial spats in the South China Sea have also blustered relations between China and countries like Philippines, Vietnam, Taiwan, Malaysia, and Brunei in recent years, and these tensions have only escalated in the wake of U.S. President Barack Obama's announced “pivot” of focus to the region (Xu 2014). And while Washington has deepened its security cooperation with China's counterparts, Moscow has remained silent on the territorial disputes (Mankoff 2013). In fact, Russia has engaged in open diplomacy with Vietnam, and Russia's defence industry is currently expanding its weapons sales throughout Southeast Asia, including selling advanced attack submarines to the Vietnamese Navy (Rozman 2014: 267, Mankoff 2013). To China's frustration Russian energy companies have even signed deals with Vietnam to develop oil and gas resources in the South China Sea – waters claimed by China (Mankoff 2013).

For Russia, on the other hand, the Central Asian region is especially important. However, recent Chinese economic power has sidelined Russia, and China's activities in pursuing the Silk Road Economic Belt is at odds with Putin's aggressive push for a Eurasian Union (Rozman 2014: 252). There has also been resentment in Russia because of China's hesitation to back the Russian war in Georgia in 2008 (Rozman 2014: 250).

Like in Sino-Russian economic cooperation, there appear to be a change for the better in their military and political cooperation, but does the relationship resemble more a

strategic or a pragmatic partnership? Russia and China seem aligned in their shared belief that the post-Cold War international order, designed by and for the United States, denies them their rightful place at the table, however, they also appear to be occupied with the relative power of the other. Even though the two countries appear to have similar visions regarding world affairs far away from home, they have quite different, even competing, views on regional issues. The lopsided nature of both their economic relationship and political relationship also poses the question of whether Russia would be willing to engage in a strong and sustainable partnership where China has the leading role; putting aside past glories and trusting that a rising China poses no threat to its own security. This does not appear to be the case. Instead, zero-sum considerations seem to be a continuing part of the relationship, pointing to a pragmatic partnership.

The geopolitical explanation anticipated closer Sino-Russian cooperation as part of a counterweight against American unipolarity, and even though there has indeed been closer cooperation both economically, militarily and politically, the two countries have not come together on several of their own core issues. The energy deals, and the Sino-Russian gas agreement in particular, does not appear to be “win-win” situations either, due to mutual concerns over the countries’ relative gains. It could very well be that Western economic sanctions against Russia pushed them to seal the deal with China, which in return met China’s booming needs for energy and resources (Feng 2015). This would support the hedging explanation, where China in a non-aggressive manner achieved a more secure relationship with a Great-Power neighbour by increasing its level of interdependence while at the same time gaining more energy security for itself. The hedging theory would be satisfied with a pragmatic partnership between China and Russia, which would provide them with a basis for cooperation on issues that are advantageous for China while not restricting their foreign policy in other political areas. Recent situations on the global arena have not provided Russia with a lot of friends, and on the question of whether China would sign the Sino-Russian gas agreement primarily to secure a continuing pragmatic relationship or a deeper partnership with a distrustful state that does not support their core regional interests the answer would have to be “probably not”.

In this subsection I have looked into the areas of economic, political and military cooperation between China and Russia using Smith's categorization of partnerships. By using both secondary sources from academics and the media as well as primary sources such as statements from high officials from both countries, I find that the two states currently maintain a *pragmatic* relationship. I have used both secondary and primary sources because the historical accuracy as to what has been going on between the two countries share priority with the two states' perceptions of each other and the relationship they have and want to have for the future. Regarding their future relationship, the analysis shows that there have been signs of rapprochement, which could indicate a strategic partnership in the future. This is, however, dependent on a Russian leadership who accepts playing second fiddle to a rising China, and that they both succeed in constraining any animosity to centre on the other country. Given the level of mistrust among them and the difference of opinion regarding their core interests, I also find that a strategic partnership as defined by Smith is unconvincing, at least in the near future.

5.3. China's (Possible) Quest for Multipolarity

Even if the current and future relations between China and Russia appear to constitute that of a pragmatic partnership, the future of a Sino-Russian relationship depend largely on the relations these two countries have with the West, especially the United States (Feng 2015).

This next part of the discussion will attempt to clarify what priority China is giving to multipolarity and the need to change the current world power structure. The geopolitical explanation, emphasizing global contest for influence and strive for power, imply that China has placed the need to challenge the world's unipolar form high on its agenda. If the Sino-Russian gas agreement were signed as a step towards a unified front against U.S. hegemony, the geopolitical explanation would be strengthened by a shared perspective and similar view held by China and Russia on how to campaign for a multipolar world order.

The hedging explanation, on the other hand would entail that the frequent push for multipolarity is merely a term used to present itself or its position in a certain way, and not an actual objective to cause disturbances in the current world structure. Findings that would strengthen the hedging argument would rather include evidence of good relations with both Russia, the United States and other prominent actors on the international arena, while the China still asserted itself as a great power and insured itself against any disruption that might occur.

China and Russia have long been in the forefront of nations advocating for a multipolar order. The concept of multipolarity has been included in nearly all of their joint declarations, statements, and treaties since the mid-1990s to the present (Turner 2009: 159). Citing Russian Foreign Minister Sergei Lavrov in November 2014, the Chinese Newspaper *Xinhua* reported that the “tie between Moscow and Beijing is one of the key factors to enhance stability and security on the planet, creating a stable world order of multipolarity, ensuring the supremacy of law in world affairs and the democracy of international relations” (Qing 2014). China’s cooperation with Russia over the past decade and their joint opposition to United States’ unipolarity has caused some Westerners to predict an impending clash between a Sino-Russian block and the United States (Turner 2009: 164). However, despite their frequent use of the term, China and Russia has not elaborated upon how they believe multipolarity is best achieved (Turner 2009: 160).

The Russian newspaper *Pravda* raised concerns in January 2015 that the interdependency between Washington and Beijing and China’s reluctance to sever its relations with Washington might prevent a Sino-Russian counterbalance to Europe and the United States (Zanitti 2015). As we briefly discussed in section 2.1 in chapter two, China has a lot to gain by maintaining the current world order, and it is not certain that China holds global aspirations. In fact, Chinese diplomacy is remarkably risk-averse and guided by narrow national interest, concerning Taiwan, Tibet, Xinjiang, human rights, and its maritime territorial claims (Shambaugh 2013: 9). For the last two decades Beijing has maintained a conscious strategy of “maintaining a low profile”. The phrase attributed to Deng Xiaoping which encourage China to “bide its time, hide its brightness, not seek leadership, but do some things” has had a prominent position in China’s foreign

policy. Other more recent principles showing similar sentiments have been the theory of “peaceful rise” (later changed to “peaceful development” in order to not cause any disturbances abroad) and the concept of the “harmonious world”. Both of these principles posits that China’s rise will not be a threat or disrupt the existing global order (Shambaugh 2013: 21-25).

In 2003 China revised the definition of multipolarity, which was previously understood to help “weaken and curb hegemonism and power politics”. The new definition stated that China’s efforts to build multipolarity “are made to boost the democratization of international relations, help the various forces in the world, on the basis of equality and mutual benefit, enhance coordination and dialogue, *refrain from confrontation and preserve jointly world peace, stability and development*” (Guo and Blanchard 2010: 86). This non-confrontational, newer version of multipolarity is consistent with what David Shambaugh characterized as China’s hesitant and risk-averse diplomacy (Shambaugh 2013: 7); however, it shows very little of the system-changing drive that the geopolitical explanation expected. Even though the assertive logic has grown stronger in recent years as China’s rise has gathered pace, China stills seem deliberate in its attempt to avoid unnecessary conflict, engaging in diplomatic behaviour with both Russia and the United States and engaging actively in multilateral forums. China has also been clear in its statements against hegemony, and has continued to remind the world that it will “never seek hegemony” once it emerges as a major international power (Shambaugh 2013: 26).

Still, there have been attempts at taking a leadership role in regional cooperative organizations and partnerships, however, it is not clear whether any of these attempts can be said to go beyond securing China’s own narrow interests and towards actively trying to make a difference in the current international structure. Looking at efforts at strategic cooperation between Russia and China it looks like where Russia has clear structural incentives for cooperation, China has its own inward-looking agenda. The SCO, which was supposed to stand against the international “tendency” to unipolarity and subsequently balance U.S. presence in Central Asia, has, for example, had different meanings and intentions for the two countries. For while Moscow sees the SCO as

developing into a politico-military alliance, Beijing views it more as an economic cooperation zone (Turner 2009: 174).

When examining how China talks about multipolarity and uses the term practically, we see that it is mostly used to: 1) express and demonstrate friendly relations with Russia, 2) downplay any aggressive behaviour intended to change world structure, instead promoting China's peaceful intentions, and 3) establish its position as a rising power and going against any U.S. unipolar attempts at infringing upon China's "core interests". The first and second usages go clearly against what the geopolitical explanation predicts. Instead of promoting multipolarity as a goal in an attempt to strive for power and change the world structure, multipolarity is seen as an interest that China has in common with Russia (and other rising powers) and that separates them from the United States and its less democratic and stable unipolarity. Instead of using aggressive lingo in an attempt to gather the world's developing states up against the United States, multipolarity is viewed as something that is likely to happen as a by-product of China and other up-and-coming nations rise. This use of multipolarity as a *diplomatic tool* and the attempt at keeping good relations with all major actors is more in lines with what the hedging explanation trying to secure its position regardless of future events predicted. How the third usage, where China expresses its desire for multipolarity in order to justify its rising position and condemning what it perceives as U.S. unilateral behaviour, relates to the expectations of the mentioned explanations is less clear-cut.

The beginning of the section stated that the future of a Sino-Russian relationship depended largely on the relations that these two countries have with the West. Given China's reluctance to take a leadership role in affairs that is not a part of what it regards as its core interests, it seems as if direct actions to change the world order in large part depends on whether China has the possibility to pursue these interests within the current international structure. As of now, China is engaging in diplomatic work with the United States and its allies as well as in multilateral organizations and forums, acting like a responsible stakeholder. Looking into the incentives behind the signing of the Sino-Russian gas agreement it seems more likely that the kind of geopolitical drivers inherent in the geopolitical explanation was a determining factor in Russia's decision to

sign the agreement than in China's decision to sign. And that geopolitical considerations related to changing the current world power structure played a secondary role at best.

5.4. Summary and Implications

In this chapter I have attempted to decipher the extent of structural incentives behind China's decision to sign the Sino-Russian gas agreement. As a first step I have looked into Sino-Russian relations and analysed whether the Sino-Russian relationship even has the plausibility to evolve into a counterweight to United States' hegemony and the current unipolar world structure. When looking at China's historical relationship with Russia, a tumultuous relationship with a great extent of mistrust emerged, which at one point even escalated to a brief war. Recent rapprochements both politically and economically have, however, brought the two parties closer. Still, neither China nor Russia seems interested in pursuing a formal alliance, and the current Sino-Russian relationship appear to be better identified as a partnership. When applying Smith's categorization of partnerships I further established that the Sino-Russian relationship most resembled that of a *pragmatic* partnership: a tactical partnership where national interest and security concerns are the main drivers while the partners are preoccupied by the relative power of the other state.

The fact that neither state appear interested in establishing an alliance, and that their current relationship is that of the weakest form of partnership, goes against the geopolitical argument, which expected deep and continuous cooperation with the prospects of an alliance, at least long-term. The hedging explanation, on the other hand, would be supported by enough cooperation to facilitate a lasting relationship that would benefit China, while giving it the opportunity to freely pursue other advantageous arrangements. With a pragmatic partnership, this appears to indeed be the case.

Looking further into how China views the concept of multipolarity, we see that China uses the term multipolarity, not in a provocative manner to encourage structural change, but as a diplomatic tool to promote its own narrow interests. It is also clear that China desires friendly relations with both Russia and the United States, which is the

opposite of what the geopolitical explanation proposed. This could instead point to hedging behaviour where China tries to secure its long-term interest by pursuing diplomatic relations with two large energy exporting and internationally relevant powers that could become useful for China both short-term and long-term. However, these findings would also strengthen the market explanation by arguing that China is simply trying to maintain an environment that most easily facilitates trade.

Looking at China's bilateral relations with Russia and the concept of multipolarity has both strengthened the hedging explanation and weakened the geopolitical argument as a determining factor in the signing of the Sino-Russian gas agreement. It seems less than likely that China would sign the agreement mainly to oppose a state that has proven very beneficial for Chinese growth together with a state that has proven itself distrustful and volatile both historically and more recently. Keeping Washington on its toes might have been a convenient by-product of the Sino-Russian agreement for both Russia and China, but it was probably not "the cherry on top" that tipped the scale.

The last part of the analysis will look further into China's domestic drivers for natural gas with the argument that how energy in general, and natural gas in particular, is prioritized at home is likely to influence how and if China engage in bilateral energy agreements and investments abroad. Questions such as "what role is given to natural gas in China's policies and priorities at home?", and "what (and who) drives China's energy strategy forward?" will be discussed while trying to get closer to answering the main question of what the determining factor behind China's decision to sign the Sino-Russian gas agreement of May 2014 were.

6. Domestic Drivers: the environmental argument

When trying to get a grasp on China's priorities on natural gas, its policies and stated strategies on the subject is a good place to begin. China's policies and decision making process is sometimes characterized as opaque and difficult to understand for outsiders (Sun 2013, Tunsjø 2013: 81). Still, analysing the role of natural gas in China's policy documents could provide insights into China's priorities and strategies on energy imports and valuable information regarding China's decision to sign the Sino-Russian gas agreement in May 2014. By getting a better understanding of China's goals and strategies related to natural gas this chapter hopes to map out the extent of domestic incentives and see how the Sino-Russian gas agreement can be placed in a larger overarching energy plan.

The topic of China's priorities regarding natural gas has the possibility to strengthen or weaken all of the explanations outlined in this thesis; however, the empirical material directs the focus of the discussion mostly towards the hedging and environmental explanation respectively. The chapter will start out broadly, looking into China's official policies regarding energy, and then continue by analysing two areas that these documents connects China's interested in natural gas to; namely natural gas as part of a strategy to diversify China's energy mix and natural gas as part of a solution to China's environmental problems. These are also areas that the hedging and liberalist explanations have very clear preferences and expectations towards. By looking deeper into which of the two gas usages that is most supported by the Chinese government, I expect to be better equipped to determine which factor that drove the Chinese to sign the Sino-Russian gas agreement of May 2014 and by extension which of the theories that corresponds most with the empirical data.

6.1. China's policies on natural gas

A good place to start when trying to understand how the Chinese government relates to a particular political area is China's Five Year Plans (FYP). China's FYP are series of social and economic development initiatives that gives an indication of the government's strategic policy priorities over a multi-year time horizon. In addition to

the main FYPs there are also several other FYPs centred on more specific issues, such as the FYP for renewable energy or the FYP for gas development. The discussion will start by analysing China's last main FYP (referred to as the 12th FYP) to get a general sense of China's overarching goals and intentions, before discussing other policy documents directed more specifically towards energy and natural gas. These will include China's White Paper on energy from 2012 and the Energy Development Strategic Action Plan issued in 2014. Because the Energy Development Strategic Action Plan has yet to be translated into English, I will only look at general tendencies and not go into the same level of specifics as in the 12th FYP and the White Paper on Energy. By looking at where in the policy documents natural gas is mentioned and the amount of space and levels of ambitions afforded to the policy areas that natural gas is connected to, I hope to get a better sense of the priorities behind China's initiatives towards natural gas imports.

On the subject of China's official policies and intentions with regards to natural gas the various explanations are likely to have different predictions. While the hedging explanation would be supported by an emphasis on natural gas as an instrument in achieving greater diversification and energy security in China's general policies and governmental plans, the environmental explanation would be strengthened by an environmental focus; a respond to actors' outcry both inland and abroad through civil protests and interest groups, as well as international organizations and foreign states.

The hedging explanation would further predict that the more general energy strategies would result in specific policies aimed at facilitating diversification of import and investment in natural gas abroad for the Chinese NOCs, while the environmental hypothesis would imply a significant degree of policies and commitments by the Chinese government to use natural gas as part of the solution to China's environmental problems. Findings that would strengthen the geopolitical argument, which was severely weakened in the previous chapter, would be a focus on gas and energy pipelines as tools to achieve more overarching structural and geopolitical goals, while evidence pointing to a treatment of natural gas as nothing more than another commodity would be in line with what the market explanation predicted.

These largely divergent expectations on how China views and prioritises natural gas as an energy resource will hopefully provide a fruitful discussion while granting a basis for strengthening one explanation at the expense of the others.

China's 12th FYP, White Paper on Energy and Strategic Action Plan

China's FYPs typically continue long-term economic and social policy goals from previous plans, and the policy targets can be perceived as quite general, however, they can also be useful to reveal the direction that the government wants to take and be a good starting point when looking at China's governmental policies.

The 12th FYP adopted by the Chinese government in March 2011, covering the years 2011-2015, devotes considerable attention to energy and environmental concerns, and focuses on the balance between securing continuous economic growth and sustainable development. According to a direct translation provided by the British Chamber of Commerce in China, the 12th FYP seeks to "promote the development of diversified and clean energy" (China, 12th FYP 2011: 11). One element of this is the continued promotion of natural gas as a clean source of energy. When mentioning natural gas the 12th FYP describes the need to improve natural gas import pipelines, LNG receiving stations and cross-regional trunk gas transmission and distribution networks as part of a strategy on diversified energy production (China, 12th FYP 2011: 11).

The connecting of natural gas with energy security through import pipelines is certainly something that corresponds with the hedging explanation. In addition to relating natural gas pipelines with energy security, and by that indicating a possible improvement in China's competitive ability should a period of crisis in the international energy market occur, it also declares natural gas pipelines as something of strategic importance. The FYPs are coordinated at the highest level of government, and the fact that natural gas is mentioned here in connection with China's need to improve its energy security could indicate that it has been recognized as a matter of major national security interest to China's future.

On the other hand, the space afforded natural gas, and natural gas imports in particular, in the 12th FYP is not very extensive. The document is mostly focused on energy sources

such as petroleum, coal and renewable energy sources. This could signify that the role of natural gas is less important for the Chinese government than other forms of energy, but that does not necessarily have to be the case. The fact that China has issued its very own FYP on gas development would certainly undermine that claim (China, FYP on Gas Development 2011). Nevertheless, in order to determine which role natural gas import pipelines are playing in China's quest to improve its energy security it is necessary to look into how these guidelines are transferred into practical politics, which is something that will be elaborated upon in section 6.2.

Looking at the White Paper on energy that China released in 2012 we get another sense of how China seeks to use natural gas in its efforts to improve its energy security. A White Paper is a government report on a particular subject giving information and details of future planned laws. While the FYP gives a general picture of what China wishes to achieve within a five-year period, the White Papers reveals more specifics about how the country aims to achieve its energy goals. In the paper from 2012, the focus is on sustainable energy development, strengthening international cooperation in energy and energy security. However, the aim is less on energy security through diversification and import and more on domestic development and energy conservation (China, White Paper 2012). The same goes for the 12th FYP, something that is even more apparent when taking into account the separate FYP dedicated to natural gas production (China, 12th FYP 2011, China, FYP on Gas Development 2011).

There could be several reasons behind this near exclusive focus on domestic production when discussing natural gas as an energy source. However, the White Paper's emphasis on reducing China's CO₂ emissions and air pollution certainly requires more natural gas than either renewables or China's current domestic gas production can provide.

When reading China's White Paper on Energy from 2012 there is also a continuous focus on China's need to address its environmental problems, and on nearly every page of the 22-page long energy document the Chinese government mention environmental protection, sustainable use of energy or other references to China's increasing environmental challenges. As China's overall goals of energy development, the paper states: "The state strives to advance the transformation of its energy production and

utilization modes, and build a modern energy industrial system which features secure, stable, economical and clean development, so as to support sustainable economic and social development with sustainable energy development” (China, White Paper 2012: 7). Mentioning the environmental challenge in particular the paper states that: “the state encourages fostering the concept of environmental-friendly and low-carbon development, coordinates the development and use of energy resources with the protection of the eco-environment while paying equal attention to both, and actively fosters an energy development pattern that meets the requirements of ecological civilization” (China, White Paper 2012: 7).

Energy and environmental concerns is also a noticeably feature in the latest FYP. While previous FYPs have emphasized economic growth above all else, the current plan put an emphasis on clean energy sources to ensure sustainable growth for the nation (KPMG Advisory 2011). What in the 11th FYP started out as a relatively modest environmental ambition, has now developed into a significant change of course.

The 12th FYP includes binding targets on resource and environmental protection. It has a goal of a 16 per cent cut in energy intensity (energy consumed per unit of GDP), 17 per cent cut in carbon intensity (carbon emitted per unit of GDP) and a boost in non-fossil fuel energy sources to 11.4 per cent of primary energy consumption (China, 12th FYP 2011).

In expressing explicit commitments to reduce carbon emissions China’s White Paper on energy echoes: “The Chinese government has made the commitment that by 2020 non-fossil energy will account for 15 per cent of its total primary energy consumption, and CO₂ emission per unit of GDP will be 40-45 per cent lower than in 2005. As a responsible nation, China will make every effort to fulfil its commitment” (China, White Paper 2012: 8).

The 15 per cent goal of non-fossil energy is again mentioned in the Energy Development Strategic Action Plan. Issued in June 2014, the Energy Development Strategic Action Plan (hereafter called the “Strategic Energy Plan”) covers the period 2014-2020. This is after the signing of the Sino-Russian gas agreement, however, it is reasonable to assume

that its research was conducted approximately at the same time as the negotiations for the Sino-Russian gas agreement and could thus be an even closer reflection of China's priorities on natural gas at the time of the signing than the two other policy documents.

The Strategic Energy Plan focuses on China's energy resource constraints, its environmental issues, and the need to improve its energy efficiency and energy security. International energy cooperation is also put up as a goal, and the plan states that China will continue to actively participate in global energy governance, strengthen coordination and support enterprises to "go out".

Natural gas is given a more prominent role in this document than in the other two, and even though the plan states that domestic supply should be the main channel for China's energy security, natural gas pipeline imports are explicitly mentioned as an important measure to increase the proportion of the country's natural gas consumption. The Strategic Energy Plan also states a goal to build 120 000 km or more of additional natural gas trunk pipelines by 2020 as a means to develop China's natural gas pipeline network (China, Strategic Energy Plan 2014).

Even though the Strategic Energy Plan gives the same goal with regards to renewables as the White Paper on Energy, it is significantly "greener" due to its clear commitments on coal consumption. Unlike prior documents the Strategic Energy Plan commits China to cap its coal consumption at 62 per cent by 2020. Given China's high priority to be energy self-reliant, this points to an increasing awareness of the country's environmental challenges and need for action to reduce its CO₂ emissions and improve air quality. The Strategic Energy Plan also states that by 2020 China seeks to increase the proportion of natural gas to 10 per cent or more, and labels natural gas as a "clean" energy source with valuable peak shaving abilities.

This explicit focus on environmental issues and the need to take action in all the mentioned policy documents could strengthen the environmental explanation. However, natural gas is not featured as a prominent solution to China's environmental problems in the two first policy papers. Instead, resource conservation and increasing use of non-fossil fuel resources are presented as the main means to achieve the aspired

emission reductions (China, 12th FYP, 2011: 4, China, White Paper 2012). In the subchapter “Promoting Clean Development of Fossil Energy” in the Energy Policy paper we do however find that “efforts will also be made to enhance the peak-shaving ability of natural gas” (China, White Paper 2012: 15), which indicates that China do see natural gas as a useful supplement to an increased use of clean energy. This is reiterated in the Strategic Energy Plan where natural gas is promoted as a solution to China’s environmental problems together with nuclear power and renewables (China, Strategic Energy Plan 2014). But how does this link between natural gas and China’s environmental policy relate to the Sino-Russian gas agreement? Is the role of natural gas in China’s strategy to reduce its carbon footprint and promote sustainable energy big enough to be a decisive factor in China’s decision to sign the Sino-Russian gas agreement in May 2014?

In neither of the documents examined here is the space afforded to natural gas imports as part of China’s environmental strategy particularly extensive. Still, the Chinese leaders’ decision to boost the share of natural gas in the energy mix to 10 per cent by 2020 in order to fill the gap left by a desired drop in coal usage, still indicates a serious commitment to gas as part of China’s future energy development (Dong 2014). Looking at these three papers it is not clear, however, whether natural gas is pursued primarily out of environmental concerns or as part of China’s strategy to strengthen its energy security.

There are no indications though, that China is prioritizing natural gas out of structural incentives, as implied by the geopolitical explanation, and both the White Paper on Energy and the Strategic Energy Plan’s focus on strengthening international cooperation in energy is more indicative of the opposite of what the geopolitical explanation predicted. How the Chinese government connects natural gas to both issues regarding energy security and environmental issues due to its peak shaving abilities, also contradicts the expectations of the market explanation that natural gas is little more than another commodity. However, in order to get a better grasp on exactly which incentives drives China’s gas policies and what drove them to sign the Sino-Russian gas agreement from 2014 it is necessary to look further into how these more overarching policy documents compare to the practical reality of China’s gas politics.

6.2. Natural gas as part of China's diversification strategy

The impact of the global financial crisis in 2008, as well as turmoil in many parts of the Middle East and North Africa in early 2011 has caused Beijing to further realize the importance of energy source diversification (Jian 2011: 2).

In the following subchapter I will discuss policies linked to energy security and diversification, which has facilitated energy deals and pipeline agreements with other states and could be a potential driver behind the Sino-Russian gas agreement from May 2014. Empirical findings pointing to increasing pressure on the NOCs and encouragement from the government to engage in energy investments abroad in order to strengthen China's energy security, and engage in natural gas import investments in particular, would strengthen the hedging argument. It would demonstrate both that China sees this kind of agreement as important enough to render high-level attention and strengthen the argument that China views the deal as an important contribution to improve China's competitive ability should a period of crisis in the international energy market that might threaten China's energy supply occur. The subchapter will begin by discussing China's need to improve its energy security and natural gas import pipelines as a possible solution to better achieve this goal. It will then analyse policies such as China's 'Going Out' policy, regulations and policies facilitating loans and financial aid to NOCs wanting to invest abroad to see to what extent this might have acted as a driving factor behind China's decision to sign the gas agreement in May 2014.

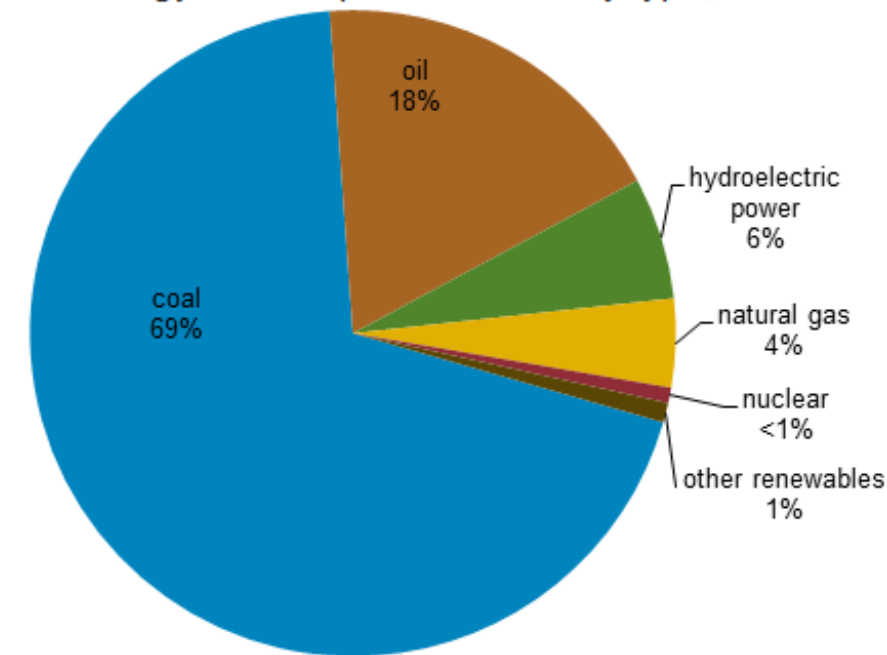
Energy security, diversification and natural gas import pipelines


Coal and oil constituted approximately 87 per cent of China's energy mix in 2011 (see figure 4).

Until the early 1990s, China had long been a net energy exporter. However, in 1993 the country became a net oil importer, and over 60 per cent of China's petroleum needs are currently filled through imports (from about 50 per cent in 2011, (Jian 2011: 3)) (Xinhuanet 2015). China turned into a net natural gas importer in 2007, and then a net coal importer in 2009 (Wu 2014).

Figure 4

Total energy consumption in China by type, 2011



 Note: Numbers may not add due to rounding.
Source: U.S. Energy Information Administration *International Energy Statistics*.

About half of its crudes are imported from the Middle East, and over 85 per cent of it is transported long distances in strategic shipping lanes such as the Straits of Malacca, Hormuz, and Suez (Jian 2011: 8). China has devoted substantial attention to the security challenge posed by the U.S. Navy's dominance of the high seas stretching from the Persian Gulf to the Ocean and the South China Sea. The Chinese government worry that American naval ability will hold China's sea-dependent economy hostage in times of crisis (Collins et al 2008). In addition to a goal of reducing its dependence on coal, mostly due to environmental concerns, it has also expressed a goal of strengthening its energy security by reducing its dependence on sea-lanes controlled by foreign powers and non-allies. One way of doing this is increasing the share of gas through pipeline imports. Even though pipelines are more vulnerable during peacetime because they are less flexible, they can also provide China with extra security during wartime by securing China continuous inflow of oil or gas should its sea-lanes be blocked.

The Sino-Russian gas agreement thus increases China's energy security by giving them a long-term contract for a flexible and highly needed energy source without having to use

sea-lanes controlled by foreign powers. By insisting upon the eastern route instead of Russia's preferred Altai route China also increased the regional gas capacity of three north-eastern provinces that are relatively small and, without access to East Siberia or Sakhalin, completely dependent on large-scale LNG imports (Paik 2014: 19).

In 2011, the net imports of natural gas (LNG and pipeline gas combined) accounted for 21 per cent of China's total natural gas use. This share is expected to increase quickly between 2015 and 2020 unless China experiences a rapid boost in its domestic production (Wu 2014: 5). Seeing the increasingly large gap between China's natural gas consumption and its gas production and the motivations behind a continuous escalation in natural gas as part of China's energy mix, we get a clearer view of some of the incentives behind China's pipeline investments and the Sino-Russian gas agreement from May 2014. However, in order for the NOCs to invest abroad in large-scale energy production with other more established NOCs and International Oil Companies (IOC), there also needs to be some policies in place facilitating the initiatives.

China's Energy Security Policies

All the way up to the 1990s, China's energy security policy could be best described as a strategy of self-sufficiency, however, in 1993 China's oil self-sufficiency ended and it started to import oil from abroad (Jian 2011: 14). To formulate national security strategies, Dr. Kang Wu, Vice Chairman at FACTS Global Energy and previous Director of Research at Facts Global Energy, lists up elements in his paper on China's energy security, suggested by scholars and experts, which were considered by the government in the early 2000s. Among these were the priority of "strengthening overseas investment by state oil companies, particularly in the Middle East, Asia Pacific, Russia and Central Asia" and "increase the investment in oil and gas infrastructure and open more channels for imports" (2014: 6). The slogan changed to "go abroad", and the NOCs started learning how to play in the global energy market via foreign direct investment (Jian 2011: 14-15).

However, the real policy change came with the initiation of the Going Out strategy, which was first adopted in an official policy formulation in the Chinese Communist Party Central Committee (CCPCC) Opinion on the Formulation of the 10th National

Economic and Social Development FYP issued in December 2000 (Freeman 2013: 8). The document listed four main investment types that were to be encouraged (processing, trade, resources extraction, project contracting) and proposed to give overseas investments policy support through credit, insurance and other facilitative services (Wenbin and Wikes 2011: 9).

In 2002, the 16th National Congress of the CCP was held. At this meeting, then President Jiang Zemin emphasized the importance of the Going Out strategy. A set of policies to further stimulate the development of China's overseas investments was issued, and with the implementation of these positive policy measures, China also strengthened its regulatory activities and took measures to improve the profitability of Chinese overseas companies (Wenbin and Wikes 2011: 10). For one thing, the previous concept of 'examine and verify' was abandoned, granting companies more freedom in investment decision-making, and the functions of government concentrated instead on serving, supervising and regulating. So-called "significant-scale" investments (>\$200 million), however, still had to be authorised by the State Council. Policies such as the 'Management method for overseas investment' from 2009 were also issued, redefining overseas investments and greatly simplifying the authorization procedure and materials, giving companies even more say (Wenbin and Wikes 2011: 11).

With the establishment of the Going Out strategy the Chinese leaders have also created several funds and credit support to facilitate overseas investments by Chinese companies. With regards to resource investment, policies such as the 'On implementing well funding for pre-project costs of overseas resources investment and economic and technical cooperation' from 2004 have been issued, to reimburse companies' pre-investments costs and assist economic and technical cooperation projects abroad (Wenbin and Wikes 2011: 12).

In 2003, the NDRC and China's export and import credit institution, Exim Bank, published a credit system for overseas investments called the 'Circular on prior support to significant overseas investment'. Significant investments mainly signify projects that can contribute to the Chinese economy or China's energy security such as 'overseas exploration projects for resources that are in domestic shortage'. Erica Downs and Peter

C. Evans from Brookings Institute report that China Exim Bank has provided lines of credit of up to \$1.2 billion to both CNPC and Petrochina, in part for overseas exploration and development (Downs 2006). In 2005, China Development Bank (CDB) and the NDRC published the 'Circular on strengthening financial support to significant overseas projects' to improve CDBs ability to fund support to significant overseas investment projects (Wenbin and Wikes 2011: 13).

The Going Out policy and the measures that followed provided investment incentives for many Chinese companies to go global, especially the Chinese oil majors. With the encouragement to seek oil and other energy resources abroad and the investment knowledge, information, guidelines and financial support that the government provided the Chinese NOCs has continuously grown and expanded their business abroad.

These policies and measures from the Chinese government show how the leadership is seeing a growing need to prioritize China's energy security and that the import of energy resources is playing a key role in this assignment. The gradual liberalization and reform of regulatory system, of financial regimes and of administrative rules have certainly made it easier for companies such as CNPC to enter into negotiations with foreign companies and a realistic hope to seal the deal. The company has already invested heavily in Central Asian energy producing states, and built multiple oil and gas pipelines to the western part of China. In recent years China has continued to develop closer ties with neighbouring states such as Russia, Kazakhstan and Turkmenistan; states with potential to help it to obtain its key objective of supply security.

However, there were no major policy initiatives or White Papers on energy released before May 2014 that was not in place at the time of at least one previous unsuccessful negotiation. Measures to encourage Chinese firms and NOCs have been issued since the early 2000s, and the policies needed for CNPC to sign the Sino-Russian gas agreement appear to have been in place years before May 2014. Also, China had been interested in buying Russian gas for over a decade, but when met with obstacles it has rather turn to other energy producing countries than reaching a compromise with Russia.

By analysing the Chinese government's incentives to invest in natural gas import pipelines and the policies and measures that they have implemented to encourage the NOCs to invest abroad, we can see the long-term energy interests that laid the foundation for the Sino-Russian gas agreement, however, it is still not clear what actually secured the deal. These governmental measures accumulated incrementally, and it could very well be that they had reached a level at a critical time for China who is in an increasingly vulnerable energy position. Still, even though energy security is high up on the agenda for the Chinese government, another subject has been repeatedly raised when the China has been talking about energy and natural gas: the environmental crisis.

6.3. Natural gas: a pollution solution?

The following subchapter will focus on natural gas imports and the Power of Siberia pipeline as a possible solution to China's environmental problems. The discussion will begin by looking at the extent of environmental degradation and social unrest due to air pollution facing China, before analysing China's environmental policies and commitments towards environmental change. An increasing amount of environmental degradation causing disturbances and a sense of urgency domestically and abroad, combined with a governmental response in the form of actual policies and commitments could strengthen the argument that the Sino-Russian gas agreement was the result of a variety of actors promoting an environmental agenda. Looking at China's environmental response, what room is there for natural gas imports and how might this have affected China's decision to sign the Sino-Russian gas agreement?

China's "airpocolypses" and environmental challenges

China is the world's largest emitter, accounting for approximately 17 per cent of the world's greenhouse gas (GHG) emissions, at 7,187 million metric tons of carbon dioxide equivalent (CO₂e) (NDRC 2009)¹. Its economic rise, which has averaged at around 10 per cent annual GDP growth for the past decade, has come at the expense of its environment and public health. China has sixteen of the world's twenty most polluted cities, water pollution affects as much as 70 per cent of the country and air pollution was blamed for the premature death of 670,000 Chinese in 2012 (Jing 2014, Nankivell

¹ This figure had grown to 10,260 CO₂e in 2011, according to World Resources Institute.

2005). Pollutants from coal-fired plants are choking urban China, and repeated occurrences of “airpocalypses” have become emblematic of the considerable downsides of a coal-based economy (Ma 2014: 8).

Environmental degradation cost the country roughly 9 per cent of its gross national income in 2008, according to the World Bank, and is exhausting the public’s patience with the government’s pace of reform. It has also damaged China’s international standing as the country expands its global influence, and threatened its stability as the ruling party faces increasing media scrutiny and public discontent (Xu 2014). In the years between 1999 and 2010 recorded “mass incidents” in China increased steadily from 32,000 to over 180,000. Chen Jiping a former leading member of CCP’s political and legislative affairs committee, stated to reports in May 2014: “The major reason for mass incidents is the environment, and everyone cares about it now... If you want to build a plant, and if the plant may cause cancer, how can people remain calm?” (O’Reilly 2014)

People are taking to the streets in cities throughout China to protest the building of coal-fired power plants, chemical plants, oil refineries, waste incinerators, and the like, and pollution is now the leading cause of social unrest in China (Gardner 2014). In a survey conducted in China in 2013 by the Pew Research Center 47 per cent of the respondents rated China’s air pollution a “very big problem”, an increase of 11 per cent over the previous year and 16 per cent over 2008 (Desilver 2013, Topal and Chung 2014). Yang Zhaoifei, vice-chair of the Chinese Society for Environmental Sciences, has estimated a yearly increase in environmental protests with an average of 29 per cent since 1996, and reported that in 2011 alone China witnessed an increase of an astonishing 120 per cent (Topal and Chung 2014).

With its relatively new status as the world’s largest greenhouse gas emitter, China has been facing significant international pressure to address its environmental problems. And as the United States moves toward natural gas and away from coal with its shale gas development, it is less eligible for the label as the “bad guy”, putting China in a precarious position with regards to its own measures in addressing the issues of GHG emissions and environmental degradation. Even though China may view itself as a

“developing” economy that has barely reached middle-income status, China’s global impact has raced ahead of its own self-perceptions. This prevents it from behaving like a typical developing country when it comes to its energy development and causes Chinese policy to be premised on an understanding of the gravity of the country’s energy and environmental burdens (Ma 2015: 2).

China’s policies and commitments towards environmental change

In the latest FYP, as well as in the White Paper on Energy and Strategic Energy Paper, there was a heavy focus on China’s need to tackle its increasing environmental problems and how the priority of reducing China’s environmental degradation relates to other priorities such as economic growth and energy security. Even though natural gas imports has not been prominently featured with a leading role in China’s environmental plan in these documents, there is continued emphasis on emission reduction and clean development.

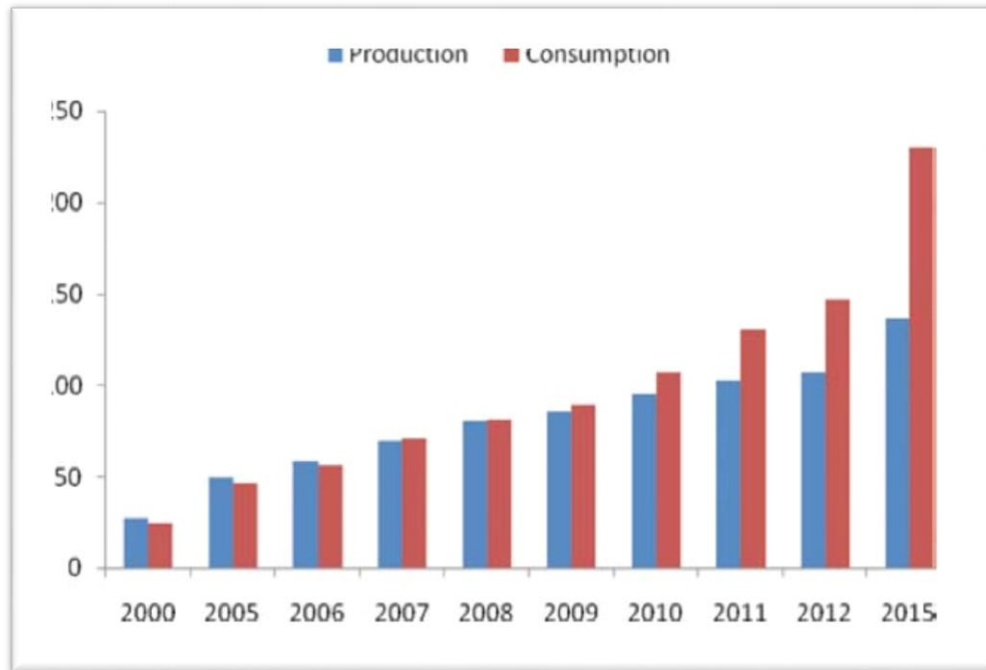
This is also prominent in the Chinese government’s international commitments and statements regarding China’s role in addressing the climate issue. At the Copenhagen Climate Change Summit in 2009 China committed to reduce its carbon dioxide emissions per unit of GDP by 40 to 45 per cent by 2020 from 2005 levels, and use non-fossil fuels for about 15 per cent of its energy (NDRC 2009). By comparison, the United States had targets in the range of 17 per cent and India 20-25 per cent by 2020 from 2005 levels (McKibbin et al. 2010: 6). Similar measures to cut emissions were echoed in November 2014, when the United States and China announced a bilateral agreement to cooperate on clean energy development and mitigate greenhouse gas emissions (Echeverría and Gass 2014). The United States stated an intention to reduce its emissions by 26 to 28 per cent below 2005 levels by 2025, while China stated intends to have its CO₂ emissions peak around 2030, and increase the share of non-fossil fuels in its energy portfolio to “around” 20 per cent by 2030 (Adler 2014). Even though this last agreement was entered into after the signing of the Sino-Russian gas agreement of May 2014, it still points to a commitment by China to reduce its emission as well as an intention to cooperate with the United States and the international community on climate change. In fact, upon this agreement the two sides have stated an intention to continue strengthening their policy dialogue and practical cooperation, including

cooperation on advanced coal technologies, nuclear energy, shale gas and renewable energy, which will help optimize the energy mix and reduce emission, including from coal, in both countries (United States 2014). If this does in fact reflect a step towards closer cooperation, it would appear as the opposite of the increasing animosity and hostility towards the United States that might strengthen the geopolitical explanation.

For China to meet its target, a drastic cut in coal's share of China's energy mix is needed. This goes hand in hand with the Chinese governments goal to reduce local air pollution, particularly in Beijing (Echeverría and Gass 2014). Much of China's effort to date to address emissions and promote energy efficiency hinges on limiting the growth of coal use, which makes sense since industrial coal is the single largest contributor to pollutants and GHG emissions, accounting for some 90 per cent of China's SO₂ emissions and 70 per cent of its CO₂ emissions (Ma 2015: 9). In the 2014 energy targets and policy priorities which were announced by the National Energy Administration (NEA), China committed itself to reduce the share of coal in the energy mix from 67 per cent in 2012 to 65 per cent in 2014 (Gastech 2014). However, a decline of coal in China's energy mix will yield a corresponding ramp up of just about every other energy resource – particularly natural gas, hydropower, nuclear power and renewables (Ma 2015: 13).

Even though natural gas is a fossil fuel, it is cleaner than burning coal and oil, and is therefore seen as an important factor in reducing air pollution and emissions with the potential role as a “bridge fuel” in China's transition to cleaner energy (Ma 2015: 13). In early 2014, China raised its target for natural gas consumption to as much as 420 bcm a year by 2020, up from 170 bcm in 2013, allegedly to reduce its dependence on the more polluting coal (Wayne Ma 2014). Explicit initiatives targeted at natural gas as a means to reduce China's coal dependence include coal-fuelled synthetic natural gas plants (SNG) and large-scale investments in domestic gas production (Yang and Jackson 2013). However, the increasing natural gas production/consumption ratio (see figure 5) appears to necessitate a continuous need for gas imports if China is to have a chance at accomplishing the coal and gas targets set out by the government.

Figure 5



Natural Gas Production and Consumption in China 2000-2015 (bcm). The production data of 2015 is estimated from CEFCs predictions. (China Energy Fund Committee 2013)

Still, when forecasting China's natural gas production capacity before 2020, the Chinese think-tank CSCI reports somewhat more optimistic figures. By 2020 they report that Chinese conventional gas production could reach 200 bcm by 2020, in addition to unconventional sources such as coal gasification, coal-bed methane and shale gas, which is estimated at 60 bcm, 50 bcm and 100 bcm, respectively (Xu 2014: 98). This would result in a total production of 410 bcm. By comparison China produced 107.5 bcm in 2012, while total consumption was a bit over 147 bcm (U.S. Energy Information Administration 2014). Under a low estimate, CSCI forecast a total production capacity of 360 bcm in 2020, with unconventional gas accounting for 44 per cent of the total. In both scenarios they report a high possibility of *oversupply* of natural gas in China, given the expected and substantial contribution from unconventional gas (Xu 2014: 98). Looking at China's energy policies and targets with regards to natural gas we saw that most of the attention was indeed given to domestic production, and given that conventional production would only yield half of the expected consumption in natural gas by 2020, it is the unconventional sources supported by frequent new development

plans and policies that could potentially reduce China's dependence on imports, turning imports into an important supplement (Xu 2014: 99). Keeping in mind the continuously growing discrepancy between China's natural gas consumption and production in figure 5, this optimism with regards to China's ability to satisfy its future demand for gas and lack of policy strategy concerning natural gas imports is quite surprising.

The continued emphasis on policies promoting indigenous production instead of imports undermines the predictions of the environmental explanation; namely that China's policies would favour natural gas imports due to environmental concerns. The externalities associated with the production of unconventional gas sources such as shale gas (including water pollution, noise pollution, explosions, and earthquakes), also undermines the argument that climate concerns is the main driver of China's gas policy (Grajdura and Mallory 2015).

The increasing environmental focus in China's policies and official statements does not appear to be directed towards natural gas pipeline imports but is instead promoting domestic production and other energy sources such as nuclear energy and renewables. The persistent emphasis on domestic gas production supplied by imports from both piped gas and LNG is instead indicative of a focus on energy security addressed by the hedging explanation.

When comparing GHG emissions, pipelines do come out far "greener" than LNG, however, this is not an argument which is promoted by the Chinese government and it is more likely that other considerations such as the security benefit during peacetime and prospects for closer cooperation in other areas weighs heavier when China is pursuing natural gas pipeline agreements abroad (Ali 2014).

6.4. Summary and implications

In this chapter on energy policies I have attempted to map out how the Sino-Russian gas agreement can be placed into a more overarching energy plan. By looking into China's policies and stated commitments on energy I have tried to find the role that is given to natural gas as an energy source, and how gas is being prioritized. I began by analysing China's current FYP (2011-2015), the White Paper on energy (2012) and the Strategic

Energy Plan (2014) to see which concerns that are most prominently featured in connection to China's plans on energy in general, and natural gas more specifically.

In all documents there is an increasing emphasis on China's environmental problems and continued need to strengthen China's energy security, however, natural gas imports are not prominently featured in either of the documents. The less notable role that gas imports is playing in these papers could lend support to the market explanation, which had an assumption of natural gas as nothing more than a commodity. However, when discussing natural gas, it is generally placed in connection with energy security and diversification and the environmental crisis as a supplement to renewables – two highly politicized and important areas for the Chinese government.

Yet again the geopolitical explanation also appear to be weakened. There is no indication in the policy documents of natural gas or any other energy source being used to enhance China's structural position in the world order and challenge U.S. hegemony. On the contrary, the White Paper on energy and Strategic Energy Plan explicitly stresses the need to cooperate both bilaterally and multilaterally on energy issues; the opposite of what might strengthen the geopolitical argument.

The emphasis on energy security and the environment found in the policy documents could, however, be used to strengthen both the hedging explanation and the environmental explanation, which is why these topics are further discussed in the next two subsections in the analysis. Here I attempt to decipher how the Chinese government is trying to convert these long-term goals into practical policies and how these could have facilitated the signing of the Sino-Russian gas agreement.

When looking at China's policies and statements towards energy security and diversification I find that natural gas does have a role that has grown incrementally during the last few years, however, there does not appear to be any new policies or incentives facilitating the signing of the Sino-Russian gas agreement that was not in place during at least one prior unsuccessful negotiation. This does not necessarily weaken the hedging explanation, as the Chinese government has indeed pushed its NOCs to engage with Russia and other gas producing countries for years, and too much

official emphasis on facilitating these kinds of deals could actually be perceived as aggressive and undermine China's desire to avoid any international disturbances and unnecessary critique.

When investigating China's policies and commitments towards its environmental crisis, I also find a significant role for natural gas. However, the policies and priorities in place are mostly directed towards domestic production and not natural gas pipeline imports. Despite quite high targets with regards to an increase in natural gas as part of its energy mix, China appears to be determined to cover as much as possible by domestic production and only rely on imports as a supplement. The Chinese position as it is presented in the discussed policy documents, in international commitments and statements, and by second accounts in Chinese think tanks and the media does not display the kind of urgent need for imports of natural gas that the environmental explanation might imply. The government does indeed appear to take the public's outcry seriously and has engaged in various measures both domestically and internationally to address its environmental crisis. Still, natural gas pipeline imports are not raised high on the climate agenda. Even though an increase in natural gas imports could have positive environmental effects in China, I have not found reason to believe that this is the main cause for the signing of the Sino-Russian gas agreement.

Having looked at possible incentives to sign the Sino-Russian gas agreement through possible market incentives (chapter four), structural incentives (chapter 5) and domestic and environmental incentives (chapter six), it is now time to puss the threads together and arrive at a conclusion to the overarching question of the analysis: *What were the decisive factors behind China's decision to sign the Sino-Russian gas agreement from May 2014?*

7. Conclusion

This thesis has discussed various factors that may have caused or contributed to China's decision to sign the Sino-Russian gas agreement. By examining the topics of price, structural incentives and domestic drivers I have attempted to cover as many angles as possible in order to identify the decisive factor behind China's decision to seal the Sino-Russian gas deal.

As expected the thesis has found numerous answers that together form the explanation to China's decision to sign the agreement. These include pressure from both abroad and at home to reduce the country's coal reliance, a growing supply/demand gap and continued need for natural gas imports, the assumed compromise on price, and Russia's last-minute concession on the route of the pipeline. The pipeline's possibility to significantly increase the energy security of north-eastern China is also likely to have been a factor when China decided to sign the agreement.

Throughout the analysis I have discussed the various explanations and contributing factors in light of different theoretical perspectives, both in order to structure the thesis, and to get a more comprehensive answer explaining the turn of events that resulted in the Sino-Russian gas agreement. The theories have included the established grand IR theories of geopolitics and liberalism/pluralism, and the more novel hedging theory. One explanation was deduced from both geopolitics and the hedging theory, and two from liberalism, called the market explanation and environmental explanation respectively.

By using a congruence method these explanations were further used to draw inferences from abstract theories to the relevance or relative strength of these theories for understanding the outcome of the Sino-Russian negotiations in May 2014. This means that instead of arriving at a set of factors which together form an explanation to the case at hand, the congruence method helps to discern the theory which best explains motivations behind these factors.

When matching the empirical findings of the analysis chapters to the explanations deduced from core elements of the hedging, geopolitical and liberalist theory, the analysis found that one theory in particular contributed with insights into China's motivations to sign the Sino-Russian gas agreement. The hedging theory, which combines strategic and market incentives, ran the danger of being too encompassing. However, with a specified set of operational criteria the theory provided the discussion with an alternative explanation for non-market behaviour that contradicted the expectations of both the geopolitical and liberalist theory.

China's need to diversify its natural gas pipeline imports as well as the need to be less reliant on LNG in the coastal areas could for example point to significant energy security benefits by ensuring access to pipeline gas in the north-eastern region. The gas deal thus fulfils the operational criterion to improve, in an observable, significant and specific way China's competitive ability should a period of crisis in the international energy market occur. The estimated price of the agreement, showing a win-win situation is likely to produce losses for the NOC CNPC. This together with the implementation costs involved reflect a cost for China, which was also a criterion for hedging behaviour. The relationship between China and Russia, best described as a pragmatic partnership, is also compatible with the hedging explanation, which implied a relationship that would sustain a good enough tone to facilitate trade and amicable cooperation yet not so good as to alienate other trading partners. Russia's concession on the Altai route would also indicate that there are fewer reasons for Europe to feel threatened by the pipeline agreement because it is less likely to affect them directly. This might provide reason to conclude that the agreement has avoided being perceived as confrontational or provocative, another criterion for hedging behaviour. The chapter on domestic drivers and policies on natural gas found policies connecting natural gas to both energy security and emission reduction. The fact that natural gas and natural gas imports are connected to energy security in China's stated policies, and that the negotiation-process and signing of the agreement involved both Chinese and Russian state leaders could also indicate that the deal is regarded as a matter of major national security interest to China.

All of the criteria listed as necessary for an action to be regarded as hedging is thus fulfilled. The strengthening of the hedging explanation throughout the analysis while continuously weakening the other competing explanations functions as a control mechanism, providing evidence for relevance of the hedging theory and evidence against the others (Blatter and Blume 2008: 333).

Comparing the thesis' findings to previous research is made difficult due to the novelty of the agreement. However, several media articles and reports published both prior to and shortly after May 2014 provide various explanations that sometimes diverge from one another. Still, except from some articles stating Sino-Russian rapprochement against U.S. hegemony as a possible driving cause, there are few efforts to place the various explanations into a more coherent strategy.

Providing a coherent explanation behind China's motives to sign the Sino-Russian gas agreement has helped to provide useful insights into how China conducts energy agreements abroad and the plans it has for natural gas as a growing part of its energy mix. The Sino-Russian gas agreement, involving two so-called Great Powers, has also given some pointers to a relationship that could previously be categorized as both adversarial and confrontational. Energy pipeline agreements are not only examples of the rapid increase in China and Russia's bilateral trade level, but has significant implications for their relationship due to the importance of securing a steady energy demand/supply for both countries and because of the inherent interdependence resulting from establishing energy pipeline connections. Russia's enormous oil and gas reserves and China's apparent endless appetite for energy is indicative of a mutually beneficial relationship that could have repercussions far beyond the two countries' borders. The findings of hedging behaviour as the main motivation behind China's decision to engage in recent energy investments with Russia could therefore provide valuable information on what we can expect for Sino-Russian energy relations in the near future.

In terms of the hedging-term and its usability, both Øystein Tunsjø's and Tessman and Wolfe's studies as well as the topic of this thesis are centred on China and Chinese

energy security. However with the implementation of the operational criteria used in this analysis I believe the hedging term could productively be applied to other contexts. China is certainly not the only country managing risks and working to insure its energy supply, and by being able to function as a theoretical tool in several contexts the hedging term is more likely to continue its development as a theory in international relations.

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